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ABSTRACT

This publication includes discussion of the use of "combined teaching systems" (and most specifically television) in various European adult education programs. Brief reports are included on several programs (general and technical education, and arts and letters courses, in France; literacy in Italy; and various televised courses in Netherlands and England). Some comments are made on research and problem-solving yet to be undertaken. Three lengthy appendixes provide more extensive material on three specific programs: educational television in rural areas in France; the Telekolleg program in the Federal Republic of Germany; and the University of Nottingham's experiment with teaching economics by a combination of television, correspondence, and face to face teaching in England. (MF)

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COUNCIL FOR CULTURAL CO-OPERATION

COMMITTEE FOR OUT-OF-SCHOOL EDUCATION

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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NEW TYPES OF OUT-OF-SCHOOL EDUCATION

COMBINED TEACHING SYSTEMS

COUNCIL OF EUROPE
STRASBOURG - 1968

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NEW TYPES OF OUT-OF-SCHOOL EDUCATION

Teaching systems
based on television and/or sound radio
and involving correspondence tuition
and face to face meetings

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I. INTRODUCTION

The concept of permanent education adopted by the Council for Cultural Co-operation as its general theme and as a major project will imply a threefold change in the structural organisation of education, the methodology and technology of teaching and the contents of programmes and curricula.

It will, indeed, be impossible to fully implement this concept unless new methods are invented and new teaching technologies generally applied.

The Committee for Out-of-School Education is studying new types of teaching and particularly the so-called combined systems.

The Committee's programme in this field contains a number of meetings of study groups as well as the organisation of study courses.

First contacts and a general survey were made at a Seminar on direct teaching by television (Rome, December 1966). Some of the more special problems are being dealt with now, such as :

- the assessment of needs } Scheveningen, July 1968
- the evaluation of results } Scheveningen, July 1968
- the organisation at the receiver's end;
- methods of total or partial programmed instruction, etc.

This report attempts to set out some of the underlying principles indicating at the same time possible developments on the basis of experiments carried out in member countries.

II. A NEW TECHNOLOGY TO MEET NEW NEEDS IN ADULT EDUCATION

The concept of permanent education is now one which is gaining general acceptance, and it is in the light of this that we must try to assess new needs in adult education itself. It seems clear that these will be such that they cannot possibly be met by the traditional methods of face to face teaching alone; there will be many who, for various reasons, cannot be reached in the conventional way; its costs will be too high, and there will not be nearly enough skilled teachers to go round. For these reasons alone, it will be necessary to integrate the mass media - particularly television and radio long since recognised as a major educational instrument - in the task which lies before us.

Mass media, and in particular radio and television, though they are powerful instruments of information and entertainment, have comparatively little power to educate. However, they can be used as the basis for more effective techniques of education than we have ever had at our disposal, if they are built into an integrated teaching system.

The problem of their integration into existing school systems is naturally small compared to the obviously urgent need of creating entirely new types of teaching in the rapidly developing field of adult education where systematic approaches are often missing.

Only by integrating the mass media into new combined teaching systems specifically designed for the various forthcoming purposes of adult education will it be possible to meet the wide range of future needs in this field.

The integration of TV and radio with the traditional tools of education can provide us with a new educational technology which has both greater range and greater penetration than anything which we have so far seen.

The development of such teaching systems in the CCC member countries is undoubtedly to be considered as one of the main tasks of general educational planning and cultural development in Europe.

This new educational technology combines:

(a) The transmission of information (knowledge and skills).

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(b) The systematic exercise of transmitted information (the application of knowledge, the practising of skills, the trying out of attitudes, the development of self-correction and control).

(c) The regular monitoring of the work and rapid feed-back.

(d) The personal contact with tutors and group discussion.

It is devised to integrate some of the following essential elements:

(a) Specially prepared television and radio programmes.

(b) Printed and other material for programmed self-instruction specifically designed as supporting literature to the broadcast courses.

(c) Correspondence education as a link between students and tutors.

(d) Face to face meetings between students and tutors and between students and students.

These elements are particularly suited to raise motivation and holding power, as well as general efficacity:

(a) Specially prepared television and radio programmes, together with printed material, can reach into almost every home and can engage and hold the attention of very large numbers of adults who would not or could not attend conventional classes.

(b) Programmed self-instruction for such viewers and listeners will include, as the subject demands, the widest possible variety of exercises, tasks, reading and other assignments, problems to be solved, etc.

(c) As many and as regular opportunities as may be possible of contact with tutors and contact with other students will have to be provided in order to control and correct the process of self-instruction. Contact with tutors may often be conducted through correspondence since this may be the only agency which has as wide a coverage as television and radio.

(d) It also may, and should as far as possible, take the form of regular face to face meetings.

These teaching techniques will reach their maximum effectiveness if they can be integrated into one teaching system and if they are all designed to serve a common educational purpose.

It is essential for the appropriate use of this new technology that

- its elements are seen as simply different aspects of one educational process (it is in general not sufficient just to add e.g. a correspondence course onto an existing and separately conceived series of television or radio programmes);
- its organisation and control (combined with an evaluation of results) are centralised, thus allowing regular monitoring of the work done by students and by tutors and rapid feed-back of this into broadcast programmes, correspondence courses, and all the other elements in the system.

III. EXPERIMENTS CARRIED OUT AND CONCLUSIONS DRAWN FROM THEM

A. Experiments

The following list of experiments and projects was discussed by the Study Group which met in April 1967:

Belgium

1. Some general television programmes on diverse subjects like "How to keep young" (the comportment of modern man in a more and more "unnatural" environment), "**Problems of** country people", "The language problem in Flanders", "Astronomy", "Chemistry", "Parent education" and particularly "Modern language courses".

France

2. "Radio-Telebac" - a course of methodological guidance and help for candidates who have failed their "baccalauréat" and can sit for it again in the same year.

3. General and technical education for adults - a series of programmes of "Radio-télévision française" being developed into a combined system with the help of the "Centre national de télé-enseignement".

4. Social and community development in Brittany - residential courses combining television programmes with group work.

5. Televised courses of the "Conservatoire National des Arts et Métiers", Paris - Television used as a means to avoid overcrowded lecture rooms, to develop group work and to cater for a more general public.

Federal Republic of Germany

6. "Telekolleg" - a complete system of courses of the "Zweiter Bildungsweg" (an alternative route of secondary education) - Bayerischer Rundfunk, Munich, with the help of the Bavarian Ministry of Education.

Italy

7. "Telescuola" - a regular series of courses on upper elementary school level for schoolchildren as well

as for adults organised by the Italian broadcasting authorities (RAI) in conjunction with the national Ministry of Education.

8. "Non è mai troppo tardi" - systematic courses for illiterates developing into more advanced primary education programmes, organised by the Adult Education Department of the Italian Ministry of Education.

Netherlands

9. "Teleac" - financed through the Ministry of Culture, Recreation and Social Welfare:

   (a) a particularly successful course on "the farm as an enterprise";

   (b) a course on "Automation" as a typical example where an "academic" approach in the first part of the programme to a subject of interest made it inappropriate to the needs of traditional adult education, and special arrangements had to be made to adjust the last part of the course (on the social effects of automation) to a more differentiated audience.

Norway

10. The Norwegian State Council for Adult Education and the ad hoc Committee for the use of radio and television in schools and in adult education.

    Combined study courses, e.g. "The study on Behaviour" (Psychology for the layman).

United Kingdom

11. "The Standard of Living" - a practical introduction to economics, devised and produced in the Midlands of England by the Department of Adult Education, University of Nottingham and Associated Television Ltd.

12. Three pilot projects carried out by BBC, London

    (a) in the field of social case work;

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(b) in discussing with parents and local primary school teachers problems of curriculum development;

(c) in industrial management (the role of the supervisor and shop steward).

13. "The Open University" - an important project in the United Kingdom (replacing the earlier concept of a "University of the Air") intended to make "University" ubiquitous and available for everyone.

From this list have been selected:

(1) experiments No. 4, 6 and 11 upon which reasonably detailed reports may be found in Appendices A, B and C;

(2) experiments No. 3, 5, 8, 9, 12 (a) and 12 (c) on which brief statements are added hereafter with an emphasis on results achieved and with particular regard to:

- aims and subjects;
- numbers and categories of participants;
- methods applied;
- special problems like the partial use of selected elements of a teaching system;
- concrete needs met in each case.

These examples are supplemented by a short description of the "Open University" project (No. 13) planned in the United Kingdom.

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GENERAL AND TECHNICAL EDUCATION FOR ADULTS
"INSTITUT PEDAGOGIQUE NATIONAL" - FRANCE

The Institut Pédagogique National, (1) has since January 1964 been broadcasting televised courses specially intended for adults: two hours a week up to June 1966 - and from October 1967 onwards five-and-a-half hours a week. These programmes, consisting of a series of ten to thirty broadcasts on various subjects of general and technical education come under four main headings:

- Expression and Communication (improving knowledge of the mother tongue)
- Technical and Scientific Education (nuclear physics, electrical engineering, technical drawing and technology)
- Introduction to Economic Subjects
- Foreign Languages (English, German).

The average level is that of the end of the compulsory schooling period.

Each series of broadcasts is accompanied by a booklet (distributed in the form of one or more pamphlets) which can be used both as a manuel and as an exercise-book. Such booklets are so contrived as to enable the persons using them to apply self-correction expedients - and from time to time they have recourse to programmed instruction techniques.

The combination - "broadcast and booklet" - will vary according to the needs which the courses are designed to satisfy and the types of public to which they are addressed:

- Individual use at home, (the number of subscribers using the booklets ranges, according to the particular series of broadcasts, from ten thousand to forty thousand). This public consisting of isolated viewers includes a substantial percentage of women - and it covers all age-groups. Its aim is primarily to complete the viewers' general education, considered either for its own sake or with a view to practical

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(1) Through its Department for educational broadcasting and television.

application (e.g. to enable the adult in question to give help with the children's studies, to further some professional interest or to prepare some examination or other).

- Collective use. Scores of adult education bodies of very different character have demonstrated their interest in the programmes organised by the Institut Pédagogique National. The way in which broadcasts and booklets are integrated into the general educational programme of the different bodies takes various forms: e.g. group-preparation, group-listening and exploitation of the broadcast in something approaching a school atmosphere (e.g. centres for workers' education, courses run by firms); group-listening and impromptu discussion, with or without a discussion-leader (cf. family associations, groups of consumers ....), and, as a sequel to individual listening, group-meetings for exchanges of views and debates .... under the direction of a monitor (cf. groups for collective advancement, popular education associations).

There is provision for assessment of results by means of regular tests which are recorded in written reports and treated as may be appropriate for each of these two principal types of public:

- For those who are listening on their own, a process of sampling through written questionnaires relevant to the main series; alternatively use of the psycho-sociological approach by tape-recorded interviews in the home.

- For discussion groups, more or less sustained observation of the collective study-sessions; talks with the monitors, the course participants and those responsible for the administration.

At the present stage several fresh developments are under way or in preparation:

- Starting of a series of radio talks in October 1968;
- Experimental broadcasting during the 1967/68 period of a series of lessons designed for improving the knowledge of the mother tongue, with accompanying booklet; the two elements (broadcast and booklet) being considered as the main aids for supplying

tuition to adults who are doing a correspondence course for a vocational training examination.

- Strengthening the links between the "adult education" service of "Radio-Télévision Scolaire" and the various organisations engaged in adult education (by means of information literature, participation in programme committees and the organising of listening and discussion groups).

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TELEVISED COURSES OF THE "CONSERVATOIRE NATIONAL DES ARTS ET METIERS" (FRANCE)

One of the functions of the "Conservatoire National Des Arts et Métiers" is to provide an opportunity for employed persons to acquire a more advanced knowledge of science, technology or economics such as will fit them for more responsible posts. It also offers facilities for medium-grade employees or practising engineers to bring up to date or to improve their knowledge.

With this purpose, the "CNAM" has, since 1963, been making use of micro-wave relay links for broadcasts in direct transmission, inside the Paris region, of certain courses given in the lecture-room. The television network for this undertaking, which comprises at present a dozen reception centres, makes it possible for these courses to be available to listeners in the neighbourhood of the place where they work or in their homes. What happens is that small working groups of about 30 persons muster in these collective reception centres, and the discussion is sparked off by some tutor, or engineer, who has taken on the task of stimulating questions before or after the course, and of directing working sessions involving exercises or practical application. The attendance rate in the reception centres has proved in general to be higher than it was for the lecture-room - and the percentage of pupils successful in the examinations is likewise higher. Last year something like 3,000 persons registered for the courses. In the programme for the academic year 1967-68 there is provision for the broadcasting of 9 basic lectures dealing with mathematics, physics, electronics and communication theory.

In 1966 the "CNAM" tried a new experiment with the direct retransmission, on Network II of the "ORTF", of 5 hours of a programme from two regional stations (Paris - Eiffel Tower, and Lille - Bouvigny). Twelve additional reception centres were instituted on this occasion, and they function according to the same principle as those of the micro-wave network. The fact that these programmes are broadcast on the "ORTF" wave-lengths obviously enables the courses to be received in places other than the reception centres i.e. in factories, in schools, in administrative offices and in the home. The individual viewers can correspond with the "CNAM" and can obtain

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assistance from the same documentary material as is used by the audience in the lecture-room or the reception centres; they can have mathematics papers corrected; they can sit for examinations. From investigations made it would seem that the level of general and technical education of the viewers on their own is higher than that of the listener-groups - also that the latter are on an average a younger age-group. About half of the viewers on their own follow the courses for the sake of their mathematical or technical interests or because they have a particular liking for these subjects; 27% attend the course in order to bring their knowledge up to date; and 80% of the whole audience say they hope to go on with further study in the years to come. As for the viewers grouped together in the reception centres the same remarks apply - and for both types of broadcasting: they talk of the time gained, the closer contact established with the tutors, a better assimilation of the material.

For the beginning of the academic year 1967-68 4 basic lecture courses, in mathematics, radio-electricity and communication theory, are planned to be broadcast on "ORTF" Network II, and three of them will be receivable in any part of the national territory.

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THE ITALIAN TELEVISION PROGRAMME
"IT IS NEVER TOO LATE" (NON E MAI TROPPO TARDI)

In 1960 the RAI-Radiotelevisione Italiana organised a television programme to teach illiterate adults to read and write.

It was hoped to attract, through television, about two million illiterates who had hitherto eluded all attempts to reach them.

For that purpose, televised courses were to act as suggestive reminders, based on the fascination which television exerts through its resources in imagery. A teaching method was therefore devised which, while related to traditional methods, would make use of television's pictorial possibilities.

Consideration had also to be given to the situation of the potential pupils, adults or even old persons who, because of family or employment circumstances, found it difficult to gather round a television set.

It was therefore decided to arrange, with the co-operation of the Ministry of Education, for groups of fifteen to twenty persons to listen to the programmes with a teacher who would help them for two hours: half an hour's preparation, half an hour to view the programme together, and an hour's exercises after the transmission.

To make televised teaching more effective, a textbook was published and distributed free of charge to participants.

Finally, although the teaching was considered to be adequate, to ensure that pupils who no longer had the opportunity of practising did not forget what they had learned (a phenomenon known as illiterate relapse) a second year's course was added with a syllabus corresponding to that of the third, fourth and fifth primary classes.

The second year's lessons - also of half an hour - were transmitted thrice weekly alternating with those of the first year. Both courses were arranged in the same fashion, particularly as regards listening.

"TELEAC" (NETHERLANDS)

"TELEAC" (Television Academy) in the Netherlands broadcasts adult education programmes within a cursory framework of courses.

It uses television especially to meet existing and potential requirements as regards instruction, training, vocational guidance, further education and professional advancement. In this way it aims to help people to adjust themselves to changes in society in the technical, social, economic and scientific fields.

The TV programmes are completed by printed material and/or correspondence lessons, whereas the organisation is aimed at viewing- and discussion-groups, in close co-operation with educational organisations which are also represented in the Advisory Board of Teleac.

During 1966-67 a course on "The farm as an enterprise" was particularly successful.

This course was part of a series on economic problems of medium-sized and small enterprises. It was concerned with the problems of dairy-cattle farmers which arise from the decrease of the agrarian professional population, the necessary enlargement of the cultivated area per farm, mechanisation, etc.

The course was arranged in close co-operation with the farmers' organisations and the Ministry of Agriculture. Some viewings and pre-tests were organised (adjusted, in particular, to various categories of age). Two hundred viewing and study-groups were organised by the farmers' organisations.

Additional written material was published for this prupose in seven professional journals, read by almost every farmer in the country.

The course was divided into a theoretical and a practical part. The general presentation was made by a farmer who integrated the contributions of the various experts and whose task it was to interpret the general information from the practical point of view.

After the course an inquiry proved that about 600,000 viewers (= 8% of the television public) had been reached. This is a very high percentage for this type of course.

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36% of the organised viewers found the course extremely useful. It could be derived from the results, that there was a positive correlation between the appreciation of the course on the one side and the level of training and the size of the enterprise on the other.

During the evaluation of the broadcasts by agrarian experts, special attention was paid, in particular, to the desire for more consideration of the regional differences in the problems dealt with.

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"THE SOCIAL WORKERS" (BBC)

The first aim of this project was to help the large number of voluntary workers who are engaged in various ways in the British social services - in family welfare, in child care, in mental health, in work with the handicapped, and so on. It was also hoped that it would offer a useful course of social education for a more general audience. It was planned to provide an introduction in depth to the organisation of the social services and to the nature and methods of social work - by means of a series of sixteen television programmes combined with group study, private study, correspondence tuition and practical work. The project began with a short history of modern social work, then considered the main areas of present provision and ended with a discussion of future needs.

The television series was broadcast at 19.30 hours on a weekday evening during the autumn and winter of 1965-66, on the second BBC channel. At that time BBC-2 reached only selected areas of the United Kingdom, making it available to about one quarter of the population. It was estimated that a weekly audience of approximately 20,000 or 30,000 people followed the programmes, of whom about 5,000 followed them in organised groups, with qualified tutors or discussion leaders. These study groups were organised both by adult education colleges and centres and by local social service organisations. Altogether more than 280 of these groups were arranged. The series was supported by a textbook of essays closely related to the programmes; and more than 5,000 copies of this textbook were sold. In terms of numbers of participants, the correspondence course arranged by the National Extension College to support the series was the least successful element. Only 120 students enrolled, but these students took part in a very intensive course, with carefully guided practical work.

The special features of the methods employed were the use of the television programmes to provide a descriptive and documentary picture of the subject and the printed literature and group discussions to fill in extensive details and to answer outstanding questions. There were certainly problems in the fact that some participants were devoting much more time to the course than others; but the general impression was that most participants had been both stimulated in interest and informed in understanding.

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The main gains would probably be found in the 5,000 members of the organised study groups, who were asked to report in detail on their progress. Most of the members were voluntary social workers, for whom the project was designed. More than two-thirds had not previously had any social work training; and similarly more than two-thirds were not engaged in any other form of adult education. There was plenty of healthy criticism of some parts of the course; but a general agreement that members had learnt a great amount from it.

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"INDUSTRIAL AFFAIRS" (BBC)

This television-based project was designed to help the improvement of industrial relations by group discussion within industry and within industrial courses in technical colleges. The nine television programmes introduced a series of actual case-studies of industrial disputes and industrial successes; and each programme ended by raising a number of questions for discussion.

The series was broadcast at 16.00 hours on a weekday afternoon, during the autumn of 1966, on the first BBC channel. Advance information about the series was made known to industry and to technical colleges about eight months before and a number of regional meetings were held during the summer to encourage participation in the project. By the start of the series 333 groups were reported to exist, more or less evenly divided between industrially organised "work-based" groups and educationally organised "college-based" groups - though the co-operation between industry and education was one of the encouraging features of the project. It is estimated that between 5,000 and 10,000 people took part in these organised groups, which ranged from groups of apprentices to mixed groups of managers and trade union officials. All the groups were sent specially prepared "study group notes", which gave background information to the programmes and suggested points for discussion. In addition to the groups, the television programmes were watched at home by a weekly audience of approximately 50,000 viewers.

The use of the case-studies for group discussion provided the main part of the project. Most of the groups were under the guidance either of a qualified tutor in industrial relations from a university or technical college or of a firm's training officer or personnel officer. Most of them met for two hours, of which an hour and a half were spent in discussion. All the groups were asked to send in a detailed report on their progress, based on an outline questionnaire; but only 117 did in fact do so (66 works-based and 51 college-based). However, the general response of the reporting groups was that, while they had plenty of criticisms to make of some aspects of the programmes, the use of these programmes had enabled them to discuss their own industrial procedures in ways that had never been possible before and to work out ways in which these could be improved.

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"THE OPEN UNIVERSITY" (UNITED KINGDOM)

"The Open University" is at present in a planning stage only. This note is therefore a tentative one. The way the project seems to be shaping can be described, but this to some extent is a subjective view and it may be falsified by events.

Interest in the possibility of teaching through a combination of television (or radio), correspondence courses and face-to-face meetings had been prompted in Britain by experiments conducted by the University of Nottingham and by the National Extension College, and in 1965 a Committee was set up to advise the Minister of Education upon the possibility of using these techniques to meet the growing pressure upon conventional universities. The Committee reported favourably in a White Paper ("A University of the Air") published in February 1966. By the end of the year the government had committed itself to such a project; a Planning Committee for what is now called "The Open University" was appointed in the summer of 1967 and is now hard at work. The expectation is that the chief administrative officers of the University (certainly the Vice-Chancellor and Secretary) will be appointed in 1968 and that the University will begin teaching in 1970 or 1971.

The change of name - from "University of the Air" to "Open University" - is significant. This is not an institution in which people will magically acquire knowledge and get degrees just by sitting and looking at television or listening to radio. It is an institution which will teach through an integrated instructional system involving

(a) television and radio programmes (with probably more time given to radio than television) ;

(b) correspondence courses and home study programmes and kits ;

(c) face to face meetings with other students and with tutors possibly in specially provided local study centres, and

(d) short residential courses.

As in any other university, students will have to do their own learning and will find that no-one and nothing can do it for them; but they can be stimulated, helped, guided and encouraged by all these media working together.

The University will be "Open" in three senses. First, its courses will be available in every town and village in the country. Second, there are likely to be no formal entry qualifications. Third, it will probably adopt a "credit"

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structure, so that students may take particular courses and accumulate credits as and when they can. The abandonment of formal entry requirements is a bold step; it will necessitate the setting up of an effective counselling service by the university itself and the provision by various bodies concerned with adult education of an infrastructure of preparatory and introductory courses. Even so, one must be prepared for a considerable drop-out and failure rate in the first year of study (though not, it is hoped, beyond that). But it is justified by the conviction (born of long experience of adult education) that there is an enormous amount of undeveloped and untapped ability around among the population, both among those who for various reasons have not had an opportunity of higher education and among those who have had some higher education and now want to carry it further.

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B. Conclusions

The following conclusions can be drawn from the discussion of these experiments:

1. Experience shows that there is a wide range of varieties and possibilities of combining two or more elements in more or less integrated teaching systems.

2. While the effectiveness of such systems grows with the number of elements combined as well as with the degree of their integration, the appeal to the general public is likely to decrease in proportion as such systems demand time-taking and particularly written exercise.

3. Only in exceptional cases was a sufficient amount of control and evaluation of results incorporated in the experiment. It remains therefore open to doubts whether the great variety in combinations and in the degree of integration corresponds to an equally great variety of needs and interests.

4. A rough comparison of the very differently documented experiments would show two main categories or types:

   (a) those concerned with initiating the general public or groups of the population into actual and pertinent problems;

   (b) those aiming first and foremost at the transmission of knowledge and/or skills to selected interest groups.

   While the first category would content itself with more flexible schemes devised to assure a maximum of "motivation" capacity, the second one would clearly require a maximum of combined and integrated teaching technology. One might also conceive the first category as a preparatory stage for the second one, or the second as a follow-up to the first one.

5. The Bavarian "Telekolleg" scheme seems to indicate that one of the strongest "motivations" in modern adult education is the offer of officially recognised diplomas

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(i.e. professional and social advancement) linked with, and approved by, the established educational structure and institutions.

6. This kind of "motivation" is, however, limited by individual "advancement potential" and covers special interest groups (however large and important) rather than the much greater diversity of interests and needs which exist among participants in traditional adult education activities.

7. It is to be hoped that more controlled experiments will be undertaken with a view to

   - determining the categories and scale of needs and interests relevant to this new technology;
   - studying more practically the possibility of covering in one system several varieties of combination and aims at the free choice of participants.

8. It is essential that staffs responsible for the planning and implementation of combined teaching schemes embody

   - expertise and special knowledge in the subject(s) to be taught;
   - pedagogical knowledge and teaching experience;
   - experience in broadcasting techniques.

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IV. FURTHER STUDIES TO BE UNDERTAKEN AND FORTHCOMING PROBLEMS TO BE SOLVED

A. General

Only on the basis of selected case studies, such as those contained in Appendices A, B and C, and taking into account the draft plan of action proposed in chapter V of this report, will it be possible to recommend one or more patterns which would be widely applicable so as to allow effective co-ordination and profitable co-operation on the European level.

It is however clear that the series of case studies will have to be continued in order to cope with further developments by keeping the patterns up-to-date.

The vast field of aims and subjects opened up in the new concept of permanent education will have to be covered gradually whereby the growing interdependence of formal and informal education, of general education, vocational training and the traditional forms of adult education will have to be given due regard.

The main problem for which satisfactory solutions could be found in single cases, seems to be the close co-operation between broadcasting authorities and educational organisations at the receiver's end. The experts believe that governments and, in particular, Ministries of Education, would have to intervene with a view to creating permanent organisational structures of modern adult education and thus developing ad hoc collaboration between broadcasters and educators into an established institution available to everyone who wishes to make use of it. The "Telekolleg" in Bavaria might be considered as a well-developed example in this respect. The work of the new National Council for Educational Technology in Britain will also be followed with interest.

B. Some technical details

Although the new educational technology described in this report has proved its practical value and has, in some experiments, reached a considerable state of perfection, it will be necessary to explore some technical

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details such as:

- effective methods of self-control and self-correction by the student (development of home study methods);
- more frequent contacts with fellow students and tutors (possibly telephone links as well as face to face meetings);
- more rapid correction and control of exercises (development of correspondence tuition);
- greater efficacity of the feed-back system;
- improving the integration of elements towards simultaneous application (functional analysis).

C. Common programmes

In the light of the circumstances outlined in the foregoing Chapter A, it seems open to doubts whether it is possible at this stage to suggest programmes and curricula for projects on the European level.

Nevertheless, there are three categories of subjects for further consideration:

(a) Subjects of European interest, e.g.

  - European economic development;
  - European democracy and urbanisation;
  - European cultural history.

(b) Subjects of special interest for which the national catchment area would be too small, e.g.

  - the training and retraining of scientific workers.

(c) Subjects of mutual interest, e.g.

  - language teaching.

It should be noted that, already at this stage, it would be technically and methodologically possible to implement such European projects, provided that ways and means could be found:

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- to finance the educational preparation of programmes;
- to establish co-operation with broadcasting companies.

The future tasks can be summarised as follows:

- to raise the interest of all authorities and organisations concerned and in particular that of governments (Ministries of Education and other ministries responsible for adult education);

- to promote the exchange of information among member countries;

- to follow up further developments both in the technical and organisational field by comparative case studies;

- to draw up organisational and educational patterns and recommend their application;

- to encourage the creation of institutes for educational television in member countries;

- to follow up the growing infrastructure in member countries by proposing subjects of common interest and possibly embarking on the joint enterprise of fully developed European teaching programmes.

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V. DRAFT PLAN OF ACTION

The following scheme is intended to help decision-taking bodies in the planning and implementation of projects:

A. At the planning stage:

1. To define the needs and to determine the aims.
2. To investigate into the potential range of interest (sociological study on possible participants: quantitative and qualitative) and into suitable ways and means of publicising the project.
3. To decide the appropriate teaching method to be used (kind of combination best suited for the proposed purpose; arrangements for feed-back, evaluation and unified control).
4. To establish co-operation between authorities concerned and to assure the financing of the project.

B. At the stage of implementation:

5. To nominate a steering body responsible for the implementation of the project.
6. To charge a group of experts with programming (TV and/or radio programme, printed material, feed-back structure and arrangements for co-ordination and integration of all elements applied).
7. To make all necessary arrangements with suitable organisations at the receiver's end (recruitment of tutors and distribution of their tasks; planning of face to face meetings and group work).
8. To provide machinery for evaluation and assessment (current and regular control and feed-back, but also evaluation of the effects and results of the whole course in view of further experiments).

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VI. EXPEDIENCY OF INTRODUCING THE NEW TECHNOLOGY ON A LARGE SCALE

The experts claim the new technology to exist not only in theory but as a practical achievement which has proved its value and effectiveness.

The concept of permanent education would be Utopian unless this new powerful instrument can be made generally available and becomes a permanent and regular feature of a comprehensive, coherent and integrated system of education.

Thus it can be concluded that the most urgent task is to make this new technology known among competent authorities and all those concerned with and interested in the matter with a view to inviting them

- to take the analysis of experiments (Chapter III, B of this report) into careful consideration;
- to associate themselves with the plan of action suggested in the preceding chapter;
- to undertake, in the light of the foregoing considerations, carefully planned and controlled experiments which should gradually lead to establishing a widespread and permanent institution;
- to see to it that these experiments are so devised as to allow profitable European co-operation at any stage of further development to be expected in this field.

It is apparent that there have so far been relatively few experiments of this kind in the field of adult education in Western Europe and that they have used different combinations of the elements described in Chapter II above. They do, nevertheless, indicate the range of possibilities now open to us and they make it plain that these techniques can be directed towards a variety of purposes in adult education; they can serve vocational ends, they can be used for remedial purposes or for purposes of retraining, they can provide for personal development or they can help to meet pressing social needs.

It is perhaps not too much to hope that there may be opportunities of international co-operation in such projects for it is plain that, generally speaking, the larger the catchment area the more economical such courses will become. There may indeed be many interests which can be served more effectively as well as more economically upon an international instead of a national basis.

Like every other new venture this brings its attendant difficulties which will have to be solved. It costs money; although the evidence is that given sufficient numbers the cost can be less than that of face to face teaching. It will often be difficult to secure the necessary overall educational control, and clearly the relations between educational and broadcasting organisations will have to be worked out in different ways in different countries. It will often not be easy to secure effective co-operation between the various organisations of adult education that may be concerned. But the examples given in this report show that this co-operation can be effectively achieved.

At this stage, every project of this kind is an important experiment and should be as fully documented as possible so that the results may be made generally available and so that progress may be followed up by international experts.

APPENDICES

APPENDIX A

EDUCATIONAL TELEVISION IN RURAL AREAS - AN EXPERIMENT IN SOCIAL AND AGRICULTURAL DEVELOPMENT

by Louis MALASSIS
Professor of Agricultural Economics (ENSAR)
Technical and Educational Director of
the Television Experiment (TPR)

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INTRODUCTION

An experiment in social and agricultural development by means of television in rural areas (Télé Promotion Rurale - TPR) was carried out from November 1966 to February 1967, and again from November 1967 to February 1968, in Western France. It is to be continued, the experimental stage ending during the 1968-69 period.

The experiment was organised at the suggestion of the General Delegation for Social Promotion with the collaboration of the Ministry of Agriculture and French Radio and Television (Rennes Station). It has been going on since 1967 within the framework of the National Vocational Training and Social Promotion Fund.

It was directly inspired by another experiment made by the "Conservatoire National des Arts et Métiers"(1962) and by the work of the National Committee on Audio-Visual Aids meeting under the chairmanship of the Prime Minister.

The test programme took place on 18 February 1966 and about 1,000 farmers took part (1). From November 1966 to February 1967, eight "collective promotion" days were organised (twice a month), each comprising two hours television (one hour devoted to a film and one hour to a television debate broadcast live). The programmes were viewed at 190 receiving centres spread over four programme-regions of Western France. The number of registered participants was between 2,000 and 2,500 for each broadcast. In all, 17,000 student-days were recorded.

From November 1967 to February 1968, twelve days were organised on principles similar to those followed during the previous year: the broadcasting area was extended to the Poit[illegible]-Charentes region, the programmes were seen in about 350 receivi[illegible] centres and the number of participant-days was about 30,000 (2).

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(1) This first programme was produced by G. Brown, lecturer at ENSAR

(2) Provisional figure, as the results for the year 1967-68 are still being analysed

I. AIM AND METHOD

A. Promotion and development

The aim of the experiment is to assess the role of television in the promotion of adults in a rural environment and in the preparation of persons who are to control or stimulate economic and social development.

Human advancement and economic and social development are indeed closely connected phenomena: it can be said that development implies the "advancement of men" (the existence of a plan for society, improvement of technical and economic ability, the increase in the capacity to imagine and organise development structures, etc.), but also that advancement implies development (social permeability permitting access to added responsibilities and possibly the transformation of structures in order to make it possible to apply increased capacity, the simultaneous improvement of productivity and incomes, etc.). Promotion and development are therefore connected phenomena and cannot be considered separately.

Action in favour of promotion and economic and social development necessarily rests on a socio-economic basic structure, of which it is essential to have prior knowledge. The area of action of"TPR", which corresponds to five programme-regions in Western France, is relatively homogeneous as can be seen by consulting Table I.

Haute Normandie has, however, an economic and social structure which makes it more like the Paris area, and Poitou-Charentes has a lower agricultural population density than do the other programme-regions of the West. These various regions have, however, a sufficient number of common features, such as their type of production (importance of stock-rearing), for the farmers to feel directly concerned by the programme centred around their economic and social development.

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Table I

Some characteristics of the programme-regions of the area covered by "TPR"

			Haute Normandie	Basse Normandie	Bretagne	Pays de Loire	Poitou Charentes	France
	Programme-region No.		(5)	(6)	(7)	(8)	(9)	
I	1. Total population density		115	69	88	77	56	86
	2. Active male agricultural population as percentage of total active male population		14.8	32.3	33.4	30.7	32.5	18
	3. Average gross revenue per household ...		99	86	67	69	66	100
	4. Migration balance in %		- 0.7	- 4.3	- 3.8	- 2.1	- 2.6	0
II	5. Index of agricultural over-population		150 to 161	197 to 206	165 to 208	130 to 214	121 to 153	151
	6. Average age of active agricultural population			42	45	42	45	46
	7. Average size of farms (SAU)		21.2	15.4	11.7	15.9	18.4	17
III	8. Contribution of each region to the national product in 1962	Large beef cattle	5.5	8.3	8.3	12.5	6.9	100
		Pigs	2.9	4.2	18.8	7.8	4	100
		Soft wheat	6	2	4.7	5.6	5.5	100
IV	9. Milk yield per cow		2,900 to 3,000	2,900 to 3,000	1,700 to 2,400	2,300 to 2,500	2,400 to 2,700	2,600
V	10. Added value per hectare (SAU) (1962) (1,000F)		1.3	1.2	1.3	1	0.9	0.9
	11. Added value per agriculture unit (1,000F) 1961/62		11.4	7.7	6	6.6	8	8.3

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Moreover, it seems that the area covered by "TPR" could now be extended to most programme-regions of the "Grand Ouest" (about eight regions) which are sufficiently similar for it to be possible to offer programmes likely to "motivate" the population of this vast area. It is easy to understand that agriculture in the Paris basin and the East, or in the Mediterranean region, raises specific problems which differ from those in the West, and it therefore requires "adapted programmes".

B. Method

The experiment was prepared from 1963 to 1966 and a number of basic principles were put forward. Officers of farmers' unions and activators of social promotion agreed with us that an experiment in collective promotion with a socio-economic content, and reaching the largest possible number of farmers, should be attempted; this last aim is in keeping with the power of the instrument used, and the possibilities for decentralisation which it offers. From the present state of conclusions made possible by the development of the experiment, it can be assumed that four principles remain basic:

1. The participation of the users in the conception of the experiment, in that of the filmed and written documents and also in the production of programmes
2. The need for slanted information placing agriculture against the background of overall development
3. The basic role of the group (receiving centre) as an instrument for thought and action
4. Support for action taken at the lower level

1. Participation of the users in the conception of the experiment, in that of the filmed and written documents and also in the production of programmes (feed-back)

"Participation" is a basic principle of promotion which is justified by general arguments, strengthened in the "TPR" experiment by specific arguments (power of the means used, danger of indoctrination, etc.).

Participation in the conception of the experiment is achieved by means of a steering committee comprising qualified farmers representing the départements affected by the experiment.

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Participation in the preparation of filmed documents is achieved by educational teams appointed by the steering committee. Hitherto, the written documents (supporting literature) were prepared solely by "teachers", but arrangements are being made to give them a new presentation in collaboration with activators of receiving centres. Participation in the programmes is achieved in many ways: participation in the production of films, in the round table provided by television debate, and above all in the slant given to the television debate in the light of questions put by "tele-participants" (1) (feed-back).

Participation implies that farmers should raise their problems themselves (and they should be formulated in a clear manner), but the definition of the rules for action implies also that the point of view of farmers should be contrasted with that of others, that an important place should be given to slanted information and that aims at once desirable and practical should be compared and defined.

2. Need for slanted information placing agriculture against the background of overall socio-economic development

Changes in agriculture depend on overall socio-economic changes. Agriculture is not an isolated sector in the nation. Agricultural trends can be understood and explained only if they are placed within the framework of the overall development process. Thus, for example, the trend of agriculture in the West of France depends to a large extent on the industrialisation of that region without which geographical migrations which are already considerable might well increase. Thus, programmes must give an important place to the relations between agriculture and industry, and avoid the "isolation of farmers" in the face of development problems. Moreover, the development of agriculture in one area depends on its development in other areas, because of the phenomena of inter-regional competition. It is therefore important to compare inter-regional development prospects and mentalities, techniques, types of organisation, etc. It is thus necessary for programmes to broaden horizons, to make farmers aware of problems of non-agricultural sectors (which are also theirs) and other types of agriculture (which compete with theirs). When we spoke of "slanted programmes" (para. 4), the idea was not to shut up farmers within a restricted world, but to attempt to give that world its true meaning. Films of series C, which will place agriculture in the West within the context of the Common Market, at the same time indicating the prospects opened up by the latter, are intended to satisfy those aims more thoroughly.

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(1) Expression coined at the time of the "TPR" experiments: it is intended to bring out clearly the difference in attitude as compared with that traditionally associated with a "tele-viewer".

3. The basic role of the group as an instrument for thought and action

In the "TPR" experiment, the farmers taking part meet together in receiving centres. For a number of reasons, this group action is regarded as one of the most fundamental aspects of the experiment.

(a) In the socio-economic conditions of agriculture in the West, characterised by the predominance of small farms, group action is called upon to play a decisive part in development; labour banks, groups of holdings, groups of producers, co-operatives, etc. are among the forms of such action. The experience of the study centres for agricultural techniques (Centres d'Etudes de Techniques Agricoles - CETA) has already shown the fundamental part played by collective thinking in facilitating the adoption of innovations and preparing action in common.

(b) Since television makes it possible to reach a large number of farmers, those taking part are naturally very mixed with regard to their level of education, their origins, their interests, their responsibilities, etc. This heterogeneousness is "normal" in an experiment in collective promotion which implies the participation of each concerned in the advancement of all (collective progress), which is made possible by group discussion in a climate of respect and mutual understanding.

(c) From this habit of meeting periodically, of reflecting together about common problems, of seeking together to formulate rules for progress, there can emerge, at any moment, conditions for joint action. From that point of view, action for regional and agricultural development depends on the number of receiving centres.

4. Support for action taken at the lower level

"Télé Promotion" is the most recent, and probably the most powerful, instrument of promotion, but it is not the only one. For several years, most of the départements of

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Western France have had their own social promotion agencies, set up on the initiative of agricultural associations. The regional institutions of "Télé Promotion" do not intend to take the place of those département bodies, but rather to leave them complete freedom of organisation with regard to promotion in their area and, to a certain extent, to reinforce and support their work. Thus, most receiving centres are set up on the initiative of agricultural associations acting together with the social promotion agencies of the départements which are, moreover, responsible for co-ordination. As from 1968, the training of leaders for receiving centres will be their task.

The technical and educational centre provides the basic agencies with services.

II. ORGANISATION OF "TELE PROMOTION RURALE OUEST"

The following organisation chart represents the structure of "Télé Promotion Rurale"; following the order set out therein, we shall describe the various institutions or teams taking part (1).

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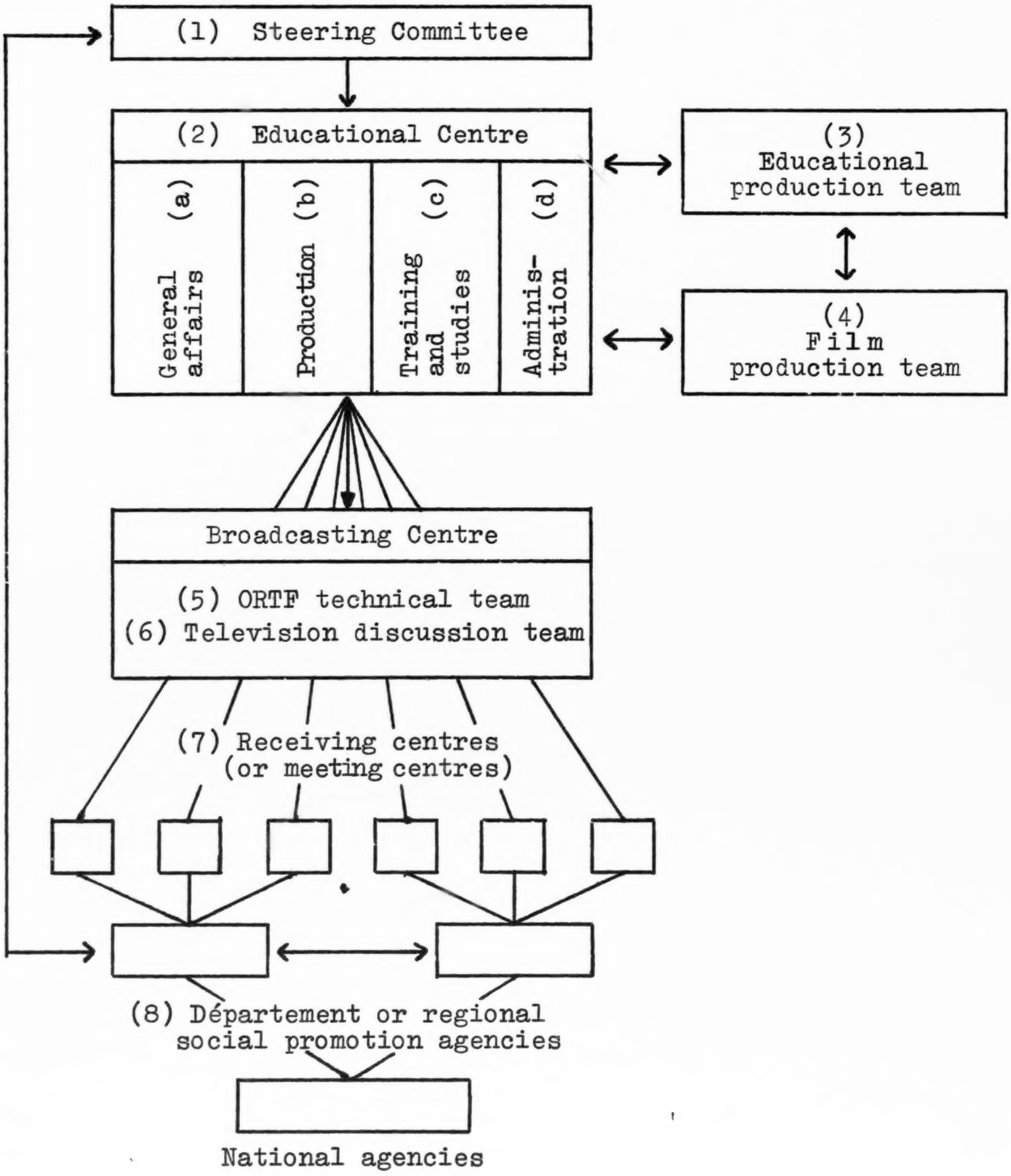
(1) This text consists of the main points of a paper read to the Third International Congress of the EBU on educational radio and television. (Item I - 31)

Table II

Organisation of "Télé Promotion Rurale Ouest"


(1) Steering Committee
(2) Educational Centre
(a) General affairs
(b) Production
(c) Training and studies
(d) Adminis-tration
(3) Educational production team
(4) Film production team
Broadcasting Centre
(5) ORTF technical team
(6) Television discussion team
(7) Receiving centres (or meeting centres)
(8) Département or regional social promotion agencies
National agencies

1. The Steering Committee is the place where participants meet each other and the programme producers to exchange ideas. It comprises representatives of the public services (agricultural experts), farmers' unions and social promotion organisations of the area (forming a large majority on the Steering Committee), and producers (educational centre, ORTF, educational and film production teams).

The aim of the Committee is to define the general policy of "TPR" in the area of action: programmes, educational principles, rules for the organisation of "receiving centres", etc.

Having established the broad outlines of the programme, its execution is left to educational teams (set up by agreement with the Steering Committee) and the educational and technical centre.

2. Educational and technical centre

Within the framework of "general policy" defined by the Steering Committee, the educational and technical centre is the place where the teams are activated and the broadcasts produced.

It comprises a director (part-time), three deputies (full-time) and sections for general affairs, production, training and studies, and administration.

3. Educational production team

Within the framework of the experiment, the educational team was set up by the teachers and research workers of the Centre d'Economie et de Sociologie Rurales of Rennes (Ecole Nationale Supérieure Agronomique). The staff of that centre (20 to 25 scientists) have been analysing for a number of years the changes in agriculture in the West, have numerous contacts with the farming world, specialise in the educational theory of rural promotion (Institut National de Promotion Agricole de Rennes) and have a wide knowledge of the regional agricultural economy. It is clear that the existence of this centre made it possible to carry out the experiment within a very short time and contributed greatly towards its success.

The educational team took part in the training sessions for activators and in the production of documents and films.

The production of films raised new problems for the team; the behaviour of teachers involved thorough pedagogic conversion: their attitude in front of the camera, the concept of "active teaching" centred round the use of television, etc.

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The educational team did not receive any special training in the use of audio-visual aids, it was trained "on the job". That apprenticeship was greatly assisted by the friendly relations which were established between the educational team and the film production team; the understanding and the competence of the leader of the film team played a great part in the success of the experiment.

Many discussions took place within the educational team on the production of films, but the handling of each broadcast was entrusted to a single teacher with power of decision who assumed full responsibility for the production of the film.

4. Film production team

Work was greatly facilitated by the assistance of the film library of the Ministry of Agriculture which gave us the benefit of its great experience acquired whilst producing films in a rural environment.

The power of the picture, in face of a tormented rural world, implies careful selection in order to back up the thought of the educationalist responsible for the broadcast. An understanding of the rural world, its difficulties, the conditions behind its approach which determine its response to the programme (without which failure is inevitable) is necessary for the film's success. The educational team assisted the film team in its work by creating conditions for reception throughout the rural world, and the film team greatly facilitated the task of the "teachers" by understanding their difficulties. There must be constant and very close relations between the educational and the film teams.

5. Technical team from the ORTF

When carrying out the experiment, very friendly and constructive relations grew up between the educational, cinematographic and technical teams. The ORTF team freed those responsible for the educational and cinematographic aspects from all technical problems and succeeded in creating a climate of confidence and spontaneity which greatly added to the success of the broadcasts. The experiment benefited from real understanding and very active support on the part of the ORTF.

6. Television debating team

"Télé débat" (television discussion) was the result of our constant desire to produce a dialogue between the tele-participants and the educational centre. This was achieved by taking into account the main interests of the tele-participants

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(expressed either by telephone in 1966-67 or directly over the air in 1967-68) starting from a round-table discussion which comprised a question-master and four to six guests.

The question-master is most frequently the person responsible for the programme of the day (i.e. responsible for the film and the supporting literature); he opens the discussion, keeps it going and sums it up.

The guests are farmers and persons known for their competence and experience in the subject under discussion.

In 1966-67, the round table included an observer who represented the tele-participants: his function was to ensure that the round table did not wander too far from the question at issue, that the replies were sufficiently precise. He was also expected to summarise unduly long discourses and, to a lesser degree, he assisted in guiding the debate. The observer's part was mainly educational.

7. Receiving centre

The farmers taking part in the experiment come together in receiving centres (or meeting centres); the number of participants varies greatly, but an audience of about 15 seems to be satisfactory from the technical (viewing of the broadcasts) and above all from the educational (participation in the group discussions) points of view. The discussion has a leader who is a farmer, an agricultural expert or a teacher.

The functioning of the receiving centres conditions the success of the experiment as a whole, because:

(a) Television cannot replace action at the lower level; it supports it.

(b) Promotion is based on participation, dialogue and group discussion, which the films and documents are designed to enrich.

The success of the experiment thus depends on the variety of the group discussion which must enable each of the participants to define his own thoughts and contribute towards the formulation of rules of action.

8. Social promotion agencies

It is relatively easier to create a network for production and broadcasting than to create a receiving network. For the participants must have motivations and the activators must realise that they have a mission, the performance of which will be decisive in the success or failure of the experiment; the farmers' representatives cannot commit themselves unless they are sure of active participation and even some control over orientation and results: the power of television suggests the idea of fear as much as of effectiveness.

Yet the broadcasting, within the field of collective promotion, of programmes without an educational receiving structure making possible discussion, the exercise of the critical faculty and a search for joint constructive action would have neither meaning nor impact.

The establishment of a receiving network thus implies guidance and control institutions and very wide initiative left to bodies concerned with promotion be they public or private when setting up receiving centres.

Within the framework of our experiment, the educational centre did not itself set up any receiving centre. By agreement with the Steering Committee, only centres having a trained activator willing to take part in the supervision and evaluation of results were recognised. Thus, about 150 centres were recognised in 1966-1967 and 350 in 1967-1968.

In 1968, the work of the département social promotion agencies will be strengthened: these bodies will be called upon to play a treble role in that they will be expected to set up a receiving centre (or stimulating centre), to co-ordinate activities and to recruit and train activators.

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III. THE TELE-PARTICIPANT'S DAY, STRUCTURE OF PARTICIPATION, ESSENTIAL ROLE OF ACTIVATORS

1. Tele-participant's day and the structure of participation

Table III reproduces the tele-participant's day; it shows clearly the outstanding importance of group work. In practice, the technical structure of the day is observed to a varying degree: for example, in certain centres participants arrive only at 10 o'clock. In 1968-1969, a fifteen-minute statement will be made between 9 and 9.15 a.m. by the person responsible for the programme.

The composition of the participants in the first round of "TPR" comprised 72% under 35 years of age, 75% men and 25% women, 57% married people and 43% single; 47% held no office in agricultural associations, 43% were individual farmers, 5% were farmers working in partnership, 49% had educational qualifications which did not go beyond the certificate of primary studies.

In 1966-1967, "TPR" broadcast a single course dealing with agricultural trends (two broadcasts per month, on Fridays).

Ways of using the programmes were very flexible, and each formed a homogeneous unit in which a single fundamental topic was presented and discussed. The participants could thus follow a complete course, choose certain broadcasts or built up an information session around one broadcast.

In 1967-1968, "TPR" broadcast two courses: a course devoted to agricultural trends, already broadcast in 1966-1967, and a new one dealing with the development of structures of agricultural production. The centres were strongly recommended to invite participants to follow all the broadcasts of one course. The statistical results of the 1967-1968 experiment are not yet available. (Cf. Table IV).

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Table III

"TPR" Day

9.00 - 10.00	Group work ----- Supporting literature		1
10.00 - 11.00	Television film		1
11.00 - 13.00	Group work ----- Preparation and selection of questions		2
13.00 - 14.30	Lunch - Relaxation		
14.30 - 15.30	Television discussion		1
15.30 - 16.30	Summing up: Rules for action		1
		TOTAL	6

Television	2 hours	33%
Group discussion	4 hours	66%

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2. Essential role of activators

(a) Functions of activators

The functions of activators can be summed up as follows:

- Motivation Explanation of the general theme of the broadcasts, the logical connection between them, their significance and relevance for the understanding of the transformation of the rural world.

- Explanations of certain aspects of the supporting literature (terminology) and the film.

- Activating group discussions by ensuring that everyone takes part, that is to say listens, reformulates another person's thoughts correctly and expresses his own ideas without straying too far from the topic of the day.

- Formulation of questions put to the educational centre (the experiment showed that it was difficult to ensure that a question did not in fact comprise a number of other questions).

- The daily routine It is sometimes difficult to persuade farmers to observe a timetable; but the use of television requires that the programme be strictly adhered to.

- Helping the group to formulate its own conclusions but without dictating them.

- Participating in control and assessment operations, seeing that questionnaires are correctly filled in while taking care not to influence replies.

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Table IV

Programme of broadcasts

Years	Dates	Topics
1966-1967		
	4 November 1966	Household consumption
	18 November 1966	Commercial organisation and the distribution of foodstuffs
	2 December 1966	Agricultural prices and markets
	16 December 1966	The agricultural and food industries
	13 January 1967	The structures of agricultural production
	27 January 1967	Agriculture and the economy as a whole
	10 February 1967	The sociology of rural development
1967-1968		
Course I		
	18 November 1967	Consumption
	2 December 1967	Markets and prices
	16 December 1967	Processing and distribution
	5 January 1968	Production structures
	19 January 1968	Town and country
	30 January 1968	Rural societies
Course II		
	25 November 1967	The great hope
	9 December 1967	I am my own boss
	23 December 1967	Production workshops
	12 January 1968	Collective agriculture: why not?
	26 January 1968	The new co-operative
	2 February 1968	Organise to develop

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(b) Origins of the activators

The following table shows the origins of 200 activators for the year 1966-1967:

	Percentage
Farmers	10
Activators of social promotion agencies	9.2
Officers of agricultural organisations and agricultural experts	52.2
Teachers	28.6
Total:	100

In general, activators of social promotion agencies are more particularly trained in activation. Many questions arise, however, with regard to the influence of the origins of activators on the efficiency of their leadership; work in progress will make it possible to answer those questions later.

Moreover, the educational levels of the activators varied greatly:

Higher education	23.2%
Full secondary education	57.5%
Other training	19.3%
Total:	100 %

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Most activators had also already attended pedagogic and technical training courses.

(c) The training of activators

Training depends on the functions with which people are to be entrusted and on their own past. Clearly, the activators taking part in the experiment formed a heterogeneous group, because of both their origins and their educational levels. That situation should not be surprising in view of the novelty and the conditions of the experiment and the change of scale which it introduced into social promotion.

In 1966-1967, having regard to the functions of the activators and the general subject of the broadcasts (place of agriculture in economic and social development), training was carried out at two successive courses each of four days.

The first course dealt with the objectives, means and methods of collective promotion; the experiment of "télé-promotion": its origins, its organisation, its meaning; the specific properties of audio-visual aids (importance of the picture); the techniques of group activation; participation in control and evaluation operations.

The second course dealt with the socio-economic training of activators. During that course, the persons responsible for programmes presented the supporting literature, the film (general conception), the activator's file. Each of these presentations gave rise to group discussions and questions to the organisers.

In 1967-1968 the extension of the experiment and the large number of participants (500 students in all) led to a more flexible formula. For next season, the technical and educational centre intends to train exclusively trainers and to use television to support training courses provided for activators at département level.

IV. EDUCATIONAL STRUCTURE

This consists of a number of factors: televised documents, printed literature, group discussions, questions put to the educational centre (feed-back) which also constitute, to a certain extent, a means of control (type, level, formulation of questions).

1. Televised documents

These include films and television discussions.

(a) Filmed documents

The expression "filmed documents" seems more suitable than the term "film". The aim of the document is to illustrate the topic of the day, to throw light by comparative treatment on the problems raised, to elicit questions from the tele-participants, to provide food for their discussions with a view to enabling them to draw their own conclusions and formulate rules to guide their work. The documents are based on interviews, production pictures, educative analogies (card games to explain the working of a labour bank, toys to represent different aspects of group agriculture, etc.), maps, diagrams, animated cartoons, etc. They are always the work of the farmers themselves; they describe "traditional" situations, research work in progress, achievements by innovators; they compare and contrast; they seek to elicit questions and thought. But it seems that there is much room for progress in this field and that study and research will still be necessary in order to master audio-visual aids in a more satisfactory manner for educational purposes.

(b) Television discussions

In 1966-1967, after each broadcast, ten receiving centres (known as "specimen centres") were called by telephone from the broadcasting station; each centre put one question. The questions made it possible to plan a broadcast lasting one hour, broadcast live and constructed in terms of the main interests of those taking part.

The first two broadcasts were made after two hours' preparation, the last six "live".

The tele-participants clearly showed their preference for live broadcasts.

In 1967-1968, the dialogue between the round table and the receiving centre was organised directly on the screen. The result was obtained either by arranging the round table in a receiving centre or by setting up a centre for delegates at the French Radio and Television Station.

That formula marked a new step forward, since, by bringing the farmers to the screen, a form of "promotion" was achieved.

On the whole, the tele-participants seemed to appreciate television debates more than filmed documents. In our future broadcasts, greater emphasis will therefore be placed on television debates.

2. Printed literature

The educational centre publishes two types of printed literature:

- "softening-up" documents
- "exhaustive" documents

In 1966-1967 only "exhaustive" documents had been prepared, but the experiment revealed that they were not widely read (at least, not before the programme).

That fact led in 1967-1968 to the preparation of "softening-up" documents comprising a few fundamental definitions, pictures for discussion, a scenario of the film and themes for reflection intended to make the participants think about the content of the day's programme. The "softening-up" documents, whose presentation was made as attractive as possible (colour, photos, drawings, etc.) are supplied free of charge before the "TPR" programme in order to encourage farmers to attend the receiving centre. (60,000 documents were sent out in 1967-1968.)

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The "exhaustive" documents, prepared by teachers, deal with the subject more fully. They are sold and intended to be read after, rather than before, the programme because of the interest that the programme was supposed to arouse. As far as possible, the document is split up into "lessons" each presented on one page; the text leaves plenty of space in order to avoid the impression of heaviness and to make it possible to add personal notes. (25,000 documents were sent out in 1967-1968.)

Important progress has been made in the presentation of supporting literature, but studies under way should permit of further improvements for the coming year.

3. Group discussions

The "group discussion" (led by specially trained activators) is a device for questioning the statements made on the screen. The pictures and texts offered are discussed; the participants may accept them, reject them, adapt them, demand additional explanations, etc. It is on the basis of group discussion that the content of a television debate is worked out and acquires real significance. The television discussion is, in fact, a broadcast completely built up on the interests and ideas of the tele-participants.

Table V

List of written and filmed documents

Written documents	Filmed documents
Course I	
Household consumption	Consumption
Agricultural prices and markets	Markets and prices
Processing and distribution	Processing and distribution
Production structures	Production structures
Agriculture and the economy as a whole	Town and country
Sociology of rural development	Rural societies
Course II	
Analysis of present structures	The great hope
Modernisation of family farms	I am my own boss
Production workshops	Production workshops
Collective agriculture	Collective agriculture: why not?
Renewal of associative action: the co-operative movement	The new co-operative
Agricultural structures and regional development	Organise to develop

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V. EVALUATION

Since the experiment is still going on, it is premature to judge the results. Control and evaluation goes on within the Steering Committee and the technical committee by evaluation meetings of the activators, by the analysis of press reports, by enquiries among participants and activators, by direct interviews with farmers who have taken part in the experiment. For 1967-1968, an enquiry based on a random sample of 150 participants is now in progress (1). A detailed publication of the results is planned during the course of 1968.

The growth in the number of tele-participants (the number of tele-participant days doubled from one year to the next) and the number of centres (which rose from 150 to about 350) is a favourable sign of the interest aroused by the experiment. It is also certain that the experiment has aroused the interest of a large number of "tele-viewers"; the broadcasts are announced in the press and since 1967-1968 the technical and educational centre has been publishing communiqués on the topics of the broadcasts for the agricultural press. It is difficult to assess the number of farmers who consequently watch the programmes (a number of planned surveys will provide us with certain indications). Moreover, the term "tele-viewer" does not correspond to our aims: we have mentioned the fact that a fundamental aspect of our experiment was the setting up of a receiving network comprising "groups" within which common thinking would be engendered which might issue, at any moment, in joint action.

The "TPR" project, assessed at the level of its impact on economic development, also probably depends on the number of receiving centres. Some schemes constitute from that point of view real control areas which call for specific and more detailed analysis.

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(1) Within the framework of the DGRST project dealing with promotion and development.

"TPR"'s effects can also be assessed in another way: it has stimulating, organising and moulding effects on the setting up of basic institutions concerned with promotion and on their working. It seeks to support the action of numerous farmers and technicians who are determined to do "something" but have hitherto lacked the means to succeed in their endeavour. But, locked at from another point of view, because of its very power, it can check certain forms of promotion in certain cases. It is clear that "TPR" forces regional authorities and activators to hammer out common foundations for a promotion programme linked to the regional development process. It is on that account that the Association for Agricultural Promotion of the West (Association de Promotion Agricole de l'Ouest - APAO), which is in charge of the "TPR" experiment, was induced to rethink its structures in order to ensure better representation of all socio-professional categories and contribute towards a definition of a promotion policy for the West of France.

The enquiries and studies in progress in 1968 will make it possible to throw light on the results of the experiment and, perhaps, help towards the improvement of that experiment in 1968-1969.

To give an idea of the extent of potential expansion, it should be noted that, if we succeeded in reaching 10,000 participants regularly, this form of promotion would affect only 1.6% of the farmers and 0.73% of the agricultural population of the West.

A lot remains to be done, but it seems evident now that, used in certain conditions, television could constitute a powerful means for the promotion of the rural world.

APPENDIX B

THE TELEKOLLEG

Progress and Experience
April 1968

by Mr. Alois SCHARDT
Consultant expert of Telekolleg

I. THE BASIC CONCEPT

The TELEKOLLEG is a teaching system, combining television programmes, supporting literature and group work. It was started on the initiative of a television department. The experience of the "Studienprogramm" (Educational and Cultural Study Programme) showed that a large segment of the population wished in fact to take courses, dealing with more than just general knowledge. This particular experience has been confirmed by wider observations which reveal that in contemporary society, the demand for information is concerned essentially with basic knowledge presented in the form of study programmes (information with a social content).

When a person gives up part of his free time and applies his energies to receiving and absorbing cultural information, he has the right to hope that his investment will provide him with additional chances for social advancement. Consequently, when starting an educational programme, intended for a large audience, one has to define both the social and personal qualifications that can be obtained by participating in such a programme.

A preliminary survey was, therefore, carried out with particular reference to the following:

(a) A socio-cultural evaluation of the desire of the population both for social advancement and for self-improvement.

(b) A study to determine the extent of lack of professional qualifications, noted in public services, administration and industry at the intermediate level.

(c) A socio-cultural examination of the main types of schools valid for paragraphs (a) and (b).

(d) An enquiry to determine which types of school, from among those already established, would best meet the needs, arising from paras. (a), (b) and (c) and would be sufficiently receptive to allow new teaching media and methods to be introduced.

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(e) An opinion poll to ascertain the study habits of persons taking correspondence courses or the "Zweiter Bildungsweg" (an alternative route of secondary education for workers).

Several important concepts which emerge from these surveys and studies may be summarised as follows:

(1) In contemporary society, the demand for information is not satisfied with current events and entertainments; it must be offered the type of knowledge which will ultimately permit greater social mobility. It has also been noted that this wish for social mobility is paralleled by a deep desire for personal advancement and a seeking after culture.

(2) In the Federal Republic of Germany, general educational publicity in recent years has explained to the population at large that in a changing society, intellectual mobility is a better guarantee of social status than material wealth or professional experience that is too specialised.

(3) The main impact of this publicity has been to persuade parents to send their children to a grammar school from the age of ten, in the hope that they will proceed to a university. Nevertheless, both industry and government are short of personnel with intermediate qualifications, that is, below the level of "Abitur" ("A" levels), and rather at "mittlere Reife" ("O" levels) stage.

(4) As only 20% of the population obtain a qualification higher than at the elementary school level and as there is a growing desire for self-improvement, the school leaving certificate of the "Realschule" (secondary modern school) or equivalent institutions such as the "Zweiter Bildungsweg" are regarded by the general public as a means of attaining social advancement.

The above thoughts, along with many others, resulted in a type of school being selected for the "first combined teaching system" in the Federal Republic of Germany which meets this desire for social advancement, namely the "Berufsaufbauschule" (vocational continuation school), an institution of the "Zweiter Bildungsweg". The traditional "Berufsaufbauschule" makes it possible for all young people (15-25 years of age) who have completed elementary school, and are serving an apprenticeship,

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to obtain the "mittlere Reife" within three years (two years of evening classes and one year of full time day attendance). The programme of this "Zweiter Bildungsweg" was drawn up to meet practical requirements. Its goal is clearly defined and its message easily understood.

The TELEKOLLEG planners decided to transfer the methods of this school to their new, combined teaching system.

II. THE STRUCTURAL ORGANISATION

How are the three aspects of television programmes, supporting literature and group work combined in the TELEKOLLEG?

1. The subjects

The TELEKOLLEG programme breakdown is as follows:

Subjects		No. of Lessons
German		78
English		78
Mathematics (Algebra: Geometry)		78
History	52	78
+		
Econ. Geography	13	
Civics	13	
Physics	65	78
+		
Chemistry	13	
Special courses		
Biology		13
Technical Drawing		26
Industrial Economics		13
Electrical Engineering		13
Chemical Engineering		5
Book-keeping		8
	Total:	468

Duration of each lesson: 30 min.

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Anyone wishing to sit for the state examination, must take five basic courses (German, English, History, Mathematics, Physics) plus additional courses in biology, economic geography, civics, chemistry and industrial economics. The choice of practical subjects such as technical drawing, electrical engineering, chemical engineering and book-keeping, is left to the student on the basis of his professional aspirations.

The TELEKOLLEG is open to all persons, irrespective of age, who have completed elementary school.

2. The system of co-operation and the distribution of responsibilities

The TELEKOLLEG has been in operation since 2 January 1967. The State of Bavaria and the Bayerischer Rundfunk (Bavaria State Radio) contracted to convert this project into an educational institution, offering courses which lead to the "Fachschulreife" (vocational school leaving certificate), recognised as a state diploma. The programme corresponds to that in the "Berufsaufbauschule". Contractually, Bavarian television is required to produce and transmit the programmes, to prepare and print the supporting literature and to distribute it to all programme participants. The Bavarian Ministry of Education looks after the organisation and smooth functioning of the "Telekolleg Days" (group instruction), the teachers' salaries, organisation of examinations and, finally, awarding of diplomas. Thus, all participants acquire their knowledge through Bavarian television from two different sources: TV programmes and supporting literature. Bavarian television has no additional responsibilities.

3. The programme components

A brief description of a typical programme layout follows, to explain how the combined system works.

(a) TV programmes

Every evening in Bavaria, TELEKOLLEG transmits a new thirty minute lesson. This lesson is repeated the following evening, and the next new lesson is given immediately afterwards. The system is carried by the Third Programme (Studienprogramm); it helps the slower students, and also allows the better students to miss a lesson occasionally. These lessons are also carried by the First Programme, but without repeats.

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Timetable: Course I (from January 1967)

Channel 1			Channel 2		
	Day	Subject		Day	Subject
6 p.m.	M	History	6.30 p.m.	M	English
	T	English		T	Physics
	W	Physics		W	German
	Th	German		Th	Maths.
	F	Maths.		F	History
10.30 a.m.	Su	Technical Drawing II	6.30 p.m.	Sa	Technical Drawing II
			7.30 p.m.	Th	Technical Drawing II (Repeat)

Timetable: Course II (from September 1967)

Channel 3

	M	T	W	Th	F	Sa	Su
6 p.m.						E.rep.	Phy. rep.
6.30 p.m.						Dr.II rep.	Gmn. rep.
7 p.m.	E	Phy.	Gmn.	Ma.	H.		Non-programme material
7.30 p.m.				Dr.II rep.			
8.15 p.m.	Ma.rep.						
8.45 p.m.	H.rep.						

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Timetable: Course II (from September 1967)

Channel 1

F	4.10 p.m.	History
Sa	1 p.m.	Physics
	1.30 p.m.	Mathematics
Su	9.30 a.m.	English
	10.0 a.m.	German
	10.30 a.m.	Technical Drawing II

(b) Supporting literature

Supporting literature is sent four to six weeks in advance to all students, who are officially enrolled.

This literature comprises between 9,000 and 10,000 pages for the entire course of approximately 2 1/2 years. It was specially prepared with this new teaching method in mind: Part 1 is intended to be used in conjunction with the actual televised programme ("Lesson Sheet"); Part 2 (Information) aims at increasing and consolidating knowledge acquired during the programme; Part 3 contains exercises to be corrected by the student himself, and work to be done for the teacher. Participants pay TELEKOLLEG a small registration fee for this literature.

(c) Group work

On "Telekolleg Days" usually a Saturday morning, participants meet for five hours. The groups are kept as small as possible (approximately 15 to 20 students) and gather at places located in their own neighbourhoods. TELEKOLLEG groups began in January 1967 and meet in 136 Bavarian towns. This aspect of TELEKOLLEG is organised and financed by the Bavarian Ministry of Education.

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After each programme, students are asked to study at home with the aid of the supporting literature, and to do exercises which they themselves will correct. Every three weeks, they must send some homework (the subject matter is indicated in the supporting literature) to their group teacher. The latter corrects and marks the homework and returns it to the students, with whom he can discuss the results personally on the "Telekolleg Days".

This system works very satisfactorily, being based on a balance between the three complementary aspects of the TELEKOLLEG method, that is, television programmes, supporting literature and group work.

This brief description clearly shows that the "Studienprogramm" of the Bavarian Radio supplies all teaching materials - that is, television programmes and supporting literature - to the student: the actual work develops from the personal contacts between student and teacher which are supervised by the state. Participants in the "Telekolleg Days" have no costs apart from travel expenses.

4. Legal dispositions

The legal status of radio and television in West Germany requires the jurisdiction of both state and radio to be defined. Radio/television are in no way subordinate to the state and, therefore, cannot be obliged to assume duties which fall to the state. If they do so, it is completely voluntarily. If they offer a teaching programme which may lead to a state diploma, this particular function must be given legal standing to preclude the possibility of state infringement of radio/television freedom. The agreement signed between the state and TELEKOLLEG is the first of its kind in the Federal Republic of Germany. It legalises co-operation between the two parties in a project leading to a state diploma. The agreement was signed in November 1966. It stipulates:

(1) The Bavarian Radio undertakes to carry the entire "Berufsaufbauschule" programme, using all available pedagogic resources. In particular, it agrees to produce and transmit the programmes of instruction. The Bavarian Radio shall also prepare all supporting literature and send it to all course participants.

(2) The Bavarian State calls upon all "Berufsaufbauschulen" and similar institutions, to co-operate with TELEKOLLEG. It undertakes to provide the necessary educational organisation, in order that the agreement can be implemented.

The Bavarian State supervises group teaching and is responsible for all additional organisation and teacher student consultations; it is further responsible for ensuring that written work sent in by participants is corrected, and organises the examinations in accordance with directives issued by the Bavarian Ministry of Education.

III. PUBLIC RESPONSE

At the end of 1966, the Bavarian Radio launched a two-stage publicity campaign for TELEKOLLEG enrolments. Initially, general information was carried by press, radio and television. All persons interested were, concurrently, asked to contact the Bavarian Radio for more precise information. As a result of this campaign in Bavaria, 30,000 replies were received. In stage two of the campaign, all those who reacted received more detailed information together with an enrolment form. Almost 50% of those, who originally replied (14,455 persons), returned their TELEKOLLEG enrolment forms with the fee of DM25. The number of enrolments exceeded all expectations; these, in fact, had been estimated at between 3,000 and 5,000. The organisers fully realised that they could not expect all participants to be genuinely interested, or to be able to study daily for two and a half years. Of the 14,455 persons enrolled, 8,500 attended the first "Telekolleg Day" which was organised in 136 localities in Bavaria. Both forecasts and surveys also suggested that this attendance was very high. During the first three months, the number of participants dropped to around 5,000, and remained stable until September 1967. The first series of intermediate examinations was held from September to December 1967. At the end of this series (December 1967) it was revealed that 3,800 persons took the examinations.

Prior to the TELEKOLLEG, there were no criteria for evaluating both determination and ability of so many students, studying by television every evening and then having their TV acquired knowledge tested. Normally, national television programmes were judged by the general criteria of entertainment and information. There was no possibility of previously checking the results of self-study by such an impersonal medium as television.

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IV. A REVIEW OF THE FIRST MONTHS' EXPERIENCE

(a) At first, the vital aspect of participation in the "Telekolleg Days" - every three weeks - was not taken seriously.

(b) Although the participants were keen to learn, they had some difficulty in adapting, during the first two months, to the unusual combination of television broadcasts and supporting literature. Moreover, this initial feeling of uncertainty was heightened by the method of presenting the material which differed from the traditional educational approach, and by the newness of the subject taught; in fact, this uncertainty was noticed whenever new material was introduced. We might conclude that the initial difficulties with this new form of teaching disappear all the more rapidly as the television method approaches the more traditional system, but they persist if this does not occur. Nevertheless, most participants adapted themselves relatively quickly.

(c) The teachers taking part in the "Telekolleg Days" (around 800 in Bavaria) were not briefed for their new assignments by television officials, because of insufficient time and also lack of experience in this field.

Although the teachers were basically in favour of the Telekolleg system, they long criticised the teaching methods used on the programmes. They were extremely tempted on "Telekolleg Days" to establish a counter-balance to the television programmes and the television teacher. These gatherings proved most effective when the teachers no longer repeated what had already been given on television, but began to run them as discussion groups and help students clear up any shortcomings by individual consultations.

(d) The publicity campaign informed participants that they would have to take all the courses in the programme. This requirement proved to be too strict. Although, the first students to enroll in January, 1967 adhered to this principle, after several weeks, three categories of students began to emerge, who differed considerably in their degree of involvement in the programme, and in their aspirations.

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Group A, attracted by a state diploma, took all the courses, and participated in the "Telekolleg Days"; Group B was only interested in certain subjects, but still wished to participate in group work on those subjects; Group C wished simply to receive the supporting literature without doing any work for outside correction, and without participating in group work.

Group A profited from the system of co-operation with the Bavarian Ministry of Education and the "Telekolleg Days", Group B viewed adult education particularly as a means of improving their knowledge. Group C consisted mainly of parents, who found material in the programme of value to help their children, and of those, who, although interested in certain subjects, did not wish to go as far as to take the examinations.

Additionally, a good many teachers used the TELEKOLLEG system as a point of departure for organising their own programmes and for revising their own methods of instruction.

(e) At the beginning of each course, all students were asked to explain why they had enrolled. A subsequent comparison of the reasons given, with their degree of determination to sit for the examinations (i.e. their attitude to outside supervision and critical appraisal of their work) was highly significant; it revealed that those students, motivated by reasons of social advancement, were keener to take the examinations, and, indeed, many more did so, that those simply interested in improving their knowledge. This is also why only 21% of TELEKOLLEG participants were women, who are less motivated socially or professionally.

As a result of the above findings, three categories of enrolments were recommended for September, 1967, corresponding to the three groups already mentioned. In September, 1967, 9.497 new students enrolled, on the following basis:

Group A:	3,452
Group B:	1,414
Group C:	4,631

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For Group B, interested only in certain courses, a new type of co-operation was established with adult education centres; in this case, mostly the "Volkshochschule" (adult education college) was used. As in the case of Group A, those in Group B must return the enrolment form to the BavarianRadio, specifying the courses they wish to take. The "Volkshochschulen" then organise, as far as possible, special courses for the desired subjects. In Bavaria, 58 courses have been organised for TELEKOLLEG in 25 "Volkshochschulen". The most popular subject has been English. The number of work group meetings under the "Volkshochschule" system still varies; however, the groups tend to gather more frequently than those in Group A, mostly once a week. It would be premature to assess the greater use of these more frequent meetings.

V. A FIRST SOCIOLOGICAL EVALUATION

Apart from the question of motivation, the social background of Group A students was of great interest. A survey of a representative sample from this group revealed the following:

80% of participants had only an elementary school education;

80% were either workers or white collar employees;

79% were men against only 21% women: the reasons for the unusual disproportion have not yet been analysed.

21% of the Group A students stated that their father is or was employed in farming or forestry. This population group was well represented as were others similarly affected by problems of job reorientation. TELEKOLLEG offers these groups, in fact, the possibility of obtaining new professional qualifications.

TELEKOLLEG was not conceived as simply a method of "supplying culture"; it was designed as a means of social advancement. This fact emerges clearly from the following data on age distribution:

22%: less than 18
22%: between 18 and 25
38%: between 25 and 35
18%: over 35

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This distribution shows that many students, having reached the limits of their own particular social advancement, were attempting to move further ahead via this educational opportunity. This is particularly true of the 18 to 35 age-group.

The distribution of participants between town and country was of special interest to the organisers of TELEKOLLEG. A considerable disparity has been noted between forecasts and actual results. The urban population (particularly in Munich and Nuremberg) reacted much more positively than the rural population: it had been thought that enrolments would come chiefly from persons living far from a suitable school. While urban students were more numerous than expected, they subsequently proved less persevering than country students. On the other hand, very few people living in communes of 500 to 2,000 inhabitants enrolled for the TELEKOLLEG. The reason for this surprising distribution is not yet known to us. An empirical investigation is in progress. The other localities are represented as forecast. This sociological distribution relates to enrolment when TELEKOLLEG was started, but no similar enquiry into the number of students remaining at the end of a year has yet been completed. Other sources of information lead us to think however that districts where there are no large towns produce a higher percentage of conscientious TELEKOLLEG students.

After nine months the official intermediate examinations enabled a first check to be made on the knowledge acquired and produced further information on students' perseverence. It may be assumed that the weakest students voluntarily abstained from sitting examinations which they knew they were bound to fail and this may be the explanation of the excellent examination results. In fact, the average mark in all subjects was higher than that obtained in the corresponding traditional schools. The following were the average marks obtained by the 3,800 candidates:

German: 13.5/20
English: 12.5/20
Mathematics: 9.9/20
Physics: 13.4/20

VI. OTHER EFFECTS OF THE TELEKOLLEG

(a) By its programmes, TELEKOLLEG has made parents more knowledgeable about their children's school curricula; this is a most satisfactory development and constitutes a truly valuable rapprochement of school and family.

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(b) For teachers from all types of school, TELEKOLLEG not only constitutes both an aid and an instrument of further training but also, more specifically, familiarises them with new teaching methods. That is especially true for teachers of science subjects, a branch where teaching methods have changed extensively, creating problems for teachers who themselves passed their examinations perhaps thirty years ago. As TELEKOLLEG had voluntarily opted for the most up-to-date methods of teaching these subjects, tensions came to light and their influence was quite clearly felt. In fact, teachers in Bavaria who participated in the "Telekolleg Days" (about 800) were strongly opposed to the affine geometry introduced into the programmes, but subsequently accepted it. The subject has since been included in the new edition of the Manual of School Curricula produced by the Bavarian Ministry of Education and Culture. The participants had less difficulty in adapting to our method as the examination results prove.

Apart from these problems directly related to teaching, TELEKOLLEG has become a highly appreciated part of television broadcasts, as indicated by the number of sets functioning while these programmes are being shown. Although the broadcasts on the First Programme are transmitted at an off-peak viewing time in Germany (6 p.m. on weekdays), 210,000 television sets are regularly turned on for the TELEKOLLEG programmes. It should, however, be noted that this number varies considerably according to the subject of the broadcast:

TELEKOLLEG Physics 210,000 sets = 10.5% (1)
TELEKOLLEG History 210,000 sets = 10.5% (1)
TELEKOLLEG English 190,000 sets = 9.5% (1)
TELEKOLLEG Mathemetics 120,000 sets = 5.7% (1)
TELEKOLLEG German 100,000 sets = 5.22% (1)

VII. POSSIBLE DEVELOPMENTS

(a) With its 468 educational broadcasts and some 10,000 pages of supporting literature, the TELEKOLLEG experiment represents an educational opportunity which, in addition to its primary aim, may be used for many other purposes and stimulate lively interest. It is possible, for example, to employ

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(1) Percentage of owners of television sets in Bavaria.

certain parts of the system for educational ends other than the present ones, and in particular as complementary studies for persons already holding diplomas, in the context of a refresher training process. TELEKOLLEG has up to now been closely linked to the Federal Republic of Germany's particular school system. It may be employed, either wholly or partly, as a medium of further training in industry. Discussions are already in progress to work out additional uses for this scheme without entailing any significant extension or increase in total volume. This possibility may be conceived of in various ways in the manner of the "building bricks system", particularly as the adaptability of the supporting documents makes it possible to lay the stress on new aims of this combined model.

(b) TELEKOLLEG constitutes a form of economic aid. After one year's operation, estimates show that TELEKOLLEG students cost the state one sixth of the sum spent so far by traditional methods of schooling to provide pupils with a similar standard of qualifications. From the point of view of educational economy, that confirms the long-held theory that it is more advantageous to transmit the educational opportunity by modern means and methods than to extend the existing schools system to the most isolated regions. This thesis does not advocate an alternative teaching method but maintains that TELEKOLLEG is a worthwhile complementary system. In addition to the economic and financial advantages a considerable staff saving has been effected although that cannot yet be estimated numerically. It will thus be possible in future, in conjunction with a system of combined education, to employ the "credits" formula which meets the mobility requirement of modern industrial societies more satisfactorily than does the rigid system of traditional schooling.

(c) Possible uses for this sytem in the developing countries are now being investigated. Delegations from South America, Africa and Asia, as well as from the less industrialised European countries, are frequently received at TELEKOLLEG headquarters in Munich. Contacts are increasing and will no doubt lead to transposition of the system for other purposes.

(d) The TELEKOLLEG system will most probably be adopted by the Federal German Länder early in 1969. We already know that Land Rheinland/Pfalz will take up TELEKOLLEG, while discussions are in progress with Land Baden-Würtemberg. Switzerland has already declared its intention to broadcast many of the

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TELEKOLLEG lessons and Austria has indicated lively interest in TELEKOLLEG. Moreover, since January 1968, the TELEKOLLEG English course has been retransmitted by the Land Hesse television network.

(e) The possibilities, as well as the limitations of TELEKOLLEG cannot yet be fully estimated. Scientific research to be carried out over a two-year period, has been initiated in order that a valid assessment of this new teaching system may be made. The results of this research will be published regularly. The first publication (compiled with the assistance of the Volkswagen Foundation) will be published shortly and will be generally available.

APPENDIX C

THE NOTTINGHAM EXPERIMENT
IN
TEACHING THROUGH TELEVISION

(1964-1965)

An account of an experiment in teaching
Economics by a combination of television,
correspondence and face-to-face teaching
conducted by the Department of Adult
Education of the University
of Nottingham

by H.C. WILTSHIRE
Professor of Adult Education
University of Nottingham

ORIGINS AND PRINCIPLES

Education is the sustained process of causing people to learn and this is something that television programmes, by themselves, are unlikely to be able to do. They may present us with new facts, new skills and new concepts but these, though they interest us at the time, will be forgotten if they remain inert. If they are to be learned they must be used: we must make an effort to remember the new facts, practise the new skills, try out the new concepts and ideas. And we must also make an effort to relate them to our existing stock of information, skills and ideas; for all education is a manipulation of the past as well as the future, a continuous process of reordering, reorientation and reappraisal, not just a mechanical adding of new facts to old. This is what makes it so interesting.

If the television programmes are on a subject in which we already have a strong interest and a considerable degree of mastery we can do this for ourselves. But most of us most of the time need help to be effective learners; this is why we have teachers and classes and courses and textbooks and all the other things that go to make up a teaching system. If television is to teach it must reach out beyond the screen and engage its viewers in some such planned process of learning. It does this in schools where its programmes are built into a highly formalised teaching system. But can it do it in adult education, where such a teaching system - the schools, the staff, the agreed syllabuses, the common examinations - hardly exists? Can we create a teaching system for this special purpose of teaching adults through television?

It is important that we should try to do this and keep on trying, for in our home-centred society the television set is for most people one of their main windows onto the world. Adult education must learn to use it, not only because it enables us to speak to more people more quickly but also because it enables us to speak to people whom we should never reach by our normal methods of recruitment - people for whom "me-looking-at-the-telly" is a normal and acceptable role, but "me-a-student-in-a-class" is not.

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1. Television programmes cannot be packed egg-tight with matter, for the viewer cannot control their pace or turn them back to have another look at a point he has missed. These are the great virtues of print: you can read at your own pace and you can turn back and re-read. So there has to be some print: references to books; probably a specially written textbook.

2. Viewers can now look and read, but they need also to do regular exercises, to rehearse facts, practise skills, use ideas. And they need to have their exercises corrected so that they may learn from instead of being misled by their errors. They need, in fact, courses and teachers. But adult students are not conveniently gathered together in schools and colleges; they are scattered individuals viewing and reading and working at home. The only kind of teaching that can reach them all, that can go wherever the television programmes can go, is correspondence teaching. So there has to be a correspondence course.

3. Our viewers are now becoming students. But a postal link between students and tutors has its obvious limitations: it is difficult for the tutor to see on the evidence of written answers alone just what are a student's difficulties, and even if they are seen and understood to deal with them by correspondence may be a laborious business for both parties. Talking is a so much swifter and more sensitive means of communication. So there have to be face-to-face meetings between students and tutors.

4. Working in isolation, even with the stimulus of a weekly television programme and correspondence course, can be a discouraging business. Just as much as they need to meet tutors students need to meet one another, to realise that their difficulties and their pleasures are shared by others and to check their preconceptions and their progress against those of others. So, for reasons more positive than the obvious ones of finance and of staffing (for we could neither find enough tutors to provide individual tuition nor enough money to pay them if they could be found) the meetings with tutors should be group meetings.

5. Any good teacher is continually responsive to his students, adapting his teaching to the cues provided by comment or question or even by changes of posture or expression. Such flexible response is a normal part of face-to-face meetings and correspondence teaching but difficult to provide in a

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series of television programmes or a printed textbook. Yet neither need to be completely cut and dried, recorded and printed, before a course begins. As much room as possible must be left for new material which is responsive to students' needs as shown by their performance.

6. If there is such a degree of flexibility there must be some machinery for monitoring both students' exercises and tutors' comments and for collecting the information which is to be fed back to those who are writing television programmes and printed material.

7. These different aspects and media of teaching - television programmes, readings, correspondence exercises, tutoring, residential courses, etc. - must be under one control and must be planned as a single, integrated teaching system. Not much will be achieved if we merely try to attach a correspondence course or a series of class meetings to a pre-existing television course which someone else has planned.

This seemed a possible way of building television into a teaching system, but whether it could be done in England and whether if it were done it would attract and hold enough students to justify it we did not know. Our only exemplars were American ones, notably Chicago's TV College, and these were not uniformly encouraging. But we could but try, and so floated the general notion in an article which appeared in the Times Educational Supplement in January 1963. The response was, of course, mixed: common objections were (a) the number of students would be too small to justify the use of such a costly medium as television, or (b) the number of students would be too large to be handled by a university adult education department, or (c) both at once.

But there came, quite unexpectedly, an expression of warm interest from Mr. Norman Collins, the Deputy Chairman of ATV, and this encouraged us to think of a possible pilot scheme in the Midlands.

It would be tedious to describe all the negotiations that followed. There were two television companies involved, for the Midlands is served by ATV during the week and by ABC at weekends. But it was ATV that agreed to sponsor and produce the programmes. We had to persuade the various committees of the television company to include such an experiment in their budget and in their educational programme, to get the formal approval of Nottingham University and of the Department of

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Education and Science to the diversion of teaching resources to the project, and to find the money to pay tutors, set up a correspondence course, print a handbook, advertise the course and meet some of the production costs. The money was provided by a generous grant from the Leverhulme Trust and by February 1964 we were committed to putting on the course which we had talked about for so long; it gave us the fright of our lives. We pulled ourselves together, calculated that we should need six months to write the scripts and the handbook, work out the exercises, recruit tutors and plan publicity, and engaged to begin broadcasting at the end of September 1964. Even so, we had no time to try out material and exercises on students, and made mistakes which we should not have made had we been able to do this most necessary pre-testing.

A TEACHING SYSTEM

What came out of all this was a course on Economics (called "The Standard of Living") based on a series of thirteen twenty-minute television programmes which were broadcast in the Midlands at 12.15 on Sunday mornings with a repeat at 10.50 on Monday mornings. They began on Sunday 27 September and ran on until Monday 21 December 1964, uncomfortably close to Christmas, as we found. The course was advertised by a wide distribution of leaflets, advertisement in all the newspapers in the area, screen publicity and contact with a number of voluntary organisations. Those who enrolled paid a fee of 10s., received a copy of a specially prepared handbook (a combination of textbook and workbook) and were assigned to a tutor in their vicinity.

The handbook covered the material of the first ten television programmes; the last three (like the later programmes themselves) were written to meet the needs shown by the work done by students in the first half of the course. Though the chapters of the handbook covered, week by week, the same topics as the television programmes, they contained more statistical material than could be shown on the small screen. The handbook also listed fifteen recommended and fairly accessible economics textbooks; every three weeks students were sent the relevant page references in all fifteen so that all had some guidance to reading outside the handbook.

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At the end of each chapter was a tear-out, foolscap, exercise sheet (see Annex), postage prepaid for its return to a central office in Nottingham. All exercises had to be in the post by Tuesday evening. Almost all included twenty or so objective questions (true/false, multiple choice, etc.) and two or three open-ended questions requiring brief statements in reply; only the last three exercises demanded essay-type answers. The objective questions were marked in the central office; the paper was then sent on to the tutor to whom the student was allocated who marked the open-ended questions and commented on the paper as a whole. Papers passed through the central office again on their way back to students where they were sampled and where a week-by-week record of students' errors was kept. When the marked papers were returned to students (usually nine days after they had been sent - too long a delay) a check sheet explaining the marking of the objective questions went with them. With this the student could work through them again and could see why the answers which the office had marked with a tick had been judged right and why those marked X had been judged wrong.

TUTORS AND TUTORING

We had little idea how many students would enrol but guessed that we might need as many as fifty tutors to teach them. We wanted tutors with a degree in Economics, teaching experience and an interest in adult education; they had also to be dispersed as widely as possible throughout the Midlands. We sought them among our colleagues in the Universities of Birmingham, Keele and Leicester and in the W.E.A., among local members of the Economics Association and in technical colleges and colleges of advanced technology. The response surprised us; there were 255 applicants from whom we selected the fifty who seemed to live in the right places and to have the right kind of experience and interests. In the event we used only thirty-eight of them; our guesses about the distribution of students were not good enough and we found that those living in the vicinity of twelve of these tutors were too few or too scattered to justify the setting up of separate student groups. One consequence of this was that the remaining thirty-eight tutors had rather too many students to deal with: on average

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about forty-three each. Tutors were paid for their correspondence teaching at the rate of 5s. per script, and for their local meetings with students 5 guineas per meeting - plus, of course, all travelling and other expenses.

We had two lengthy meetings with tutors: one for general briefing and discussion before the course began and one when the course had been running for a month to iron out difficulties (ambiguities in questions, inconsistencies in marking, and so on). We were anxious that they should see their task as: first, to encourage students to keep on working; second, to help them over difficulties, and third, to assess their progress with reference to their own previous work. They formed an admirable team, and did a difficult job with great skill and patience.

In addition to this postal contact, local student groups could meet their tutors on at least two occasions, one after the sixth programme and one after the tenth, both of them critical points in the course at which they were likely to be in particular need of help. In most cases these meetings were held on Friday or Saturday evenings and lasted for two hours or so. Naturally, tutors were free to use them as they thought best, but in most cases they reviewed matters which the exercises had shown to be difficult and discussed questions which students raised.

Lastly, and rather as a postscript to the course, those students who could do so attended a weekend meeting held at Nottingham University on 2 and 3 January 1965. This was devoted partly to further group work with tutors and partly to a review of the whole project. Lord Hill of Luton (Chairman of the ITA) and Mr. J.E. Wadsworth (Economic Adviser to the Midland Bank) were the principal speakers.

PRESENTATION

A question often asked is: why did we choose Economics as the subject for our first venture in tele-teaching? There were several reasons: (1) It is an important subject, by which I mean that it is important that there should be a wider understanding of economic principles and issues in the country as a whole. This seemed to help justify the use of public money and of a costly medium of transmission for an enterprise that might fail. (2) It is a subject which lends itself to a measure of programmed instruction since it can be broken down

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into fairly small sections which, as successively mastered, give students clear evidence of their progress. (3) It is a subject which is in many respects a study of changing relationships (as this grows larger that grows smaller; as this rises slowly that rises fast) and which is therefore apt to visual presentation. (4) It is a subject which is long-established and well-developed in adult education and in which we therefore had half a century of teaching experience upon which to draw.

The television programmes were not educational "showbiz", not a series of distinguished lectures given by a series of distinguished dons. They were quite simple and straightforward pieces of teaching presented with great skill and patience by an extra-mural tutor of long experience. They were sometimes criticised for slowness of pace and lack of visual interest, and indeed they might have been better had we had the money to spare for a little more use of film and animated cartoon. But not much more; however one may judge these programmes "as television" (whatever that may mean) as part of a teaching system they were about right; though they could of course have been improved in many ways, their slowness and simplicity were, from the students' point of view, virtues not defects. The standards which are applied to television programmes as independent artefacts are not appropriate here.

We were fortunate in the Producer and Director assigned to these programmes by ATV, and in support from beginning to end of the project from the company's Education Officer. They identified themselves wholly with our teaching aims and put immense skill at our disposal; the Director in particular worked with us at every stage in the preparation of the shooting scripts and took immense trouble to meet and talk with tutors and students.

Perhaps this is the place to add that we found co-operation with ATV easy and effective throughout. We were, after all, dealing with highly controversial issues at the time of a general election. But we were left free to script and teach as our consciences dictated: nobody ever wanted to approve a script, or suggested that we should avoid this or go easy on that, or that if a managing director was given two minutes on a programme a trade union official ought to be given another two.

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THE STUDENTS

The figures quoted below are of three kinds:

(1) Those derived from our records of each student's work; these are shown both as actual numbers and as percentages.

(2) Those derived from 867 questionnaires filled in after the course by individual students (excluding members of school and college groups). Those who fill in and return questionnaires are not, of course, representative of those who do not; on the other hand the proportion returned was high: about 60%. The questionnaire (an elaborate one) was drawn up with a view to a full analysis and report. For the purposes of this interim report I have used them in two ways:

   (a) For certain purposes I have checked through all the questionnaires; these figures are shown as percentages only.

   (b) For other purposes I have checked through a 15% sample of the questionnaires; these figures are shown as fractions only.

(3) Where comparison is made with the membership of university extra-mural classes the extra-mural figures are derived from a survey made in 1963 of 1,785 students in classes in the East Midlands provided by Nottingham University.

So this section lacks all statistical finesse. On the other hand I have only used figures which seemed to be so gross that the general direction of their significance was most unlikely to be altered by a more adequate analysis. They are crude, but justify, I believe, the conclusions which are drawn.

HOW MANY STUDENTS?

1. We do not know how many people saw the television programmes, nor is it possible to know, for the normal methods of sampling (TAM ratings, audience surveys, etc.) are too coarse to detect with any reliability numbers of this order (perhaps 30,000, perhaps 50,000?).

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2. We do know that 3,065 handbooks were bought, so presumably a rather larger number than this (for some were shared) followed or intended to follow the course.

3. 1,656 of these also enrolled for the correspondence course, etc.; these we refer to as "enrolled students".

4. 1,347 of these were individuals who of course enrolled voluntarily and worked at home; these we refer to as "individual students". 311 were members of school, college and other groups who presumably enrolled and worked under compulsion. In what follows I am concerned only with the 1,347 individual students who form a group which can quite properly be compared with the adult students in extra-mural and WEA classes.

5. Of these 1,347, 228 were non-starters; they sent in no exercises and in most cases did not reply to frequent reminders. Presumably they decided that the exercises looked too difficult - or too easy - or that they preferred to use the handbook without committing themselves to the correspondence course.

6. Of the 1,119 who actually began the course, 549 (49%) did all the twelve exercises set, 756 (68%) did ten or more, and 855 (77%) did eight or more. This is a remarkable record of persistence among voluntary, adult students working at home, for we must remember that there were a good many late enrolments who missed one or two exercises at the beginning of the course and that the proximity of Christmas created difficulties for some at the end. (Indeed the 311 members of school and college groups, though under compulsion, did not do quite so well: of these 124 (41%) did all twelve exercises, 200 (66%) did ten or more and 237 (77%) did eight or more.) The 77% who did eight or more exercises are the equivalent of what the Department of Education and Science calls "effective" students in normal adult education, i.e. those who attend at least two-thirds of the meetings and do the written work required of them. In 1962-63 74% of all students registered in extra-mural and WEA courses of similar length (10-12 meetings) were in this sense "effective": a slightly smaller proportion than among these TV students.

7. Almost all of them read the appropriate section of the handbook for every programme they watched, and over half bought or borrowed books as a direct result of the course. Most spent between one or two hours a week in reading and writing their exercise, a few a good deal longer. Almost all said that they found tutors' comments on their exercises encouraging

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or helpful or both, and that the check sheets for the objective questions enabled them to understand why they had made mistakes as well as where they had made them. Three-quarters thought that tutors' comments were sufficiently full, but a quarter would have liked longer comments.

8. About two-thirds attended the first meeting with their tutors and one-third the second. The first figure is higher than I should have expected in view of the geographical scatter of these students, the second lower, for most who had attended said that they found the meetings useful. Perhaps it was a combination of the nearness of Christmas, bad weather and the common cold. About a quarter attended the weekend meeting at the University: a larger number than I should have expected.

9. We offered, to those who wanted it and who had completed the course, a Certificate of Attendance. 717 students (65%) asked for this; mainly, it seemed, as a memento of a rather unusual effort.

WHO WERE THE STUDENTS?

1. Of the 1,347 individual students, 55% were men and 45% women; 29% were housewives. Extra-mural classes tend to attract rather more women than men; probably the choice of subject (Economics) caused the disparity here.

2. Their age distribution was as follows:

	TV students		Extra-mural students	
Under 20	11%		5%	
21 - 30	18%		16%	
31 - 40	27%		24%	
Total: 40 or under		56%		45%
41 - 50	26%		23%	
51 - 60	13%		20%	
Over 60	5%		12%	
Total: 41 or older		44%		55%

Comparison is difficult; the TV figures will be affected by the choice of subject, and the Nottingham extra-mural figures may not be representative of the Midlands generally. But there are no very striking differences: the TV group is somewhat younger

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but it shows the same bunching of students in their thirties and forties. Nor are either strikingly different from the age-structure of the adult population as a whole except for the inevitable under-representation of the over-sixties.

3. Their educational background, as indicated by the terminal age of full-time education, was as follows:

	TV students	Extra-mural students
Left school at age 13-15	38%	33%
Left school at age 16	25%	21%
Total leaving at age 16 or younger	63%	54%
Left school at age 17-19	21%	21%
Left school at age 20 or more	16%	25%
Total leaving at age 17 or older	37%	46%

Comparison here is even more difficult, for these Nottingham figures are in this respect not representative of the Midlands generally and certainly show a smaller proportion of the better-educated among their students than would be found elsewhere. So it looks as though the TV course was more successful than extra-mural classes generally in attracting those with minimal education or near it.

4. These students had been as zealous as most in seeking part-time education since leaving school; about two-thirds had attended part-time vocational classes and over a half part-time non-vocational classes. But most of these classes had been in practical and recreational subjects; liberal adult education was a new venture for most of these students and only about a sixth had ever attended a university extra-mural or WEA course.

5. The study of Economics, too, was a new venture for most of them and less than a third had tackled this subject in any way before. Why did they do it? Half said that they had no vocational purpose at all in mind when they enrolled; a third said that they joined partly because they thought that knowing a bit about Economics might be of use to them in their career; only a sixth gave this as their main reason for enrolling. Again this is probably very similar to the pattern of motivation in extra-mural classes.

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COSTS

The bill for this whole operation worked out approximately as follows:

1.	Tutoring:	Fees	£3,600	
		Expenses	600	£4,200
2.	Office:	Wages	1,300	
		Postages	1,100	
		Stationery, etc.	450	2,850
3.	Printing of handbooks, etc.			1,400
4.	Advertising:	Leaflets	800	
		Press, etc.	550	1,350
5.	Residential accommodation			500
6.	Tutors' time spent in preparing and presenting the course: cost, perhaps			1,500
7.	TV programmes: they were quite simple twenty-minute programmes, costing about £1,100 each			14,300
				£26,100
8.	Receipts:	Fees paid by students	700	
		Sale of handbooks	200	
		Fees for residential courses	500	1,400
			Net cost:	£24,700

So it cost £24,700 to provide 1,650 students with a thirteen-week course. This sounds a lot; but how much would it have cost if we had taught them by normal means? The costing of adult education is a difficult business, but it seems likely that the cost per class meeting of ordinary university extra-mural classes is somewhere in the region of £16 to £17 and that the average number of members per class is about 15. To teach 1,650 students for thirteen weeks on this basis we should have had to establish 110 classes and conduct 1,430 class meetings: total cost £24,300 - about the same as that of our television-based course. And this was our first shot; were we putting on

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the course again we should certainly make some savings, and I think we could quite properly increase the fee for the course. A fee of 10s. was after all a ridiculously small sum to charge for tuition and the handbook and all postage costs; £1 would be juster and would I think have willingly been paid by almost all of our students. (A reduced charge would be made, as it was in this case, to school and college groups.)

But the really substantial saving would come from working on a larger scale. Suppose we were putting on a nationally-based course and teaching five times as many students. Tutoring costs would be increased fivefold, office costs might be trebled, costs of printing and advertising might be doubled and that of the television programmes might be half as much again; costs of preparation would remain the same, and the cost of residential accommodation is self-balancing. So the bill for such a course might read:

Tutoring	£20,000
Office	9,000
Printing	3,000
Advertising	2,500
Residential accommodation	2,500
TV programmes	21,500
	£58,500

Our 8,000 students would pay, say, £7,000 in fees (allowing for a reduction for school and college groups) and £2,500 for residential courses; extra sales of handbooks would bring the total receipts up to £10,000 and the net cost down to £48,500.

For £48,500 we should now be teaching 8,000 students. Using the same basis of calculation as before this would be the equivalent of nearly 7,000 class meetings which, if provided by normal means, would cost something like £119,000. On this scale, therefore, a television-based course would more than halve normal costs. And an increased use of self-marking techniques, for which there is a good case on educational grounds, could bring the figure down to nearer a third of normal costs. So it really is time that we stopped thinking of such projects as expensive and eccentric luxuries.

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SOME CONCLUSIONS

1. A television-based course can recruit and hold many hundreds of good students who would not be reached otherwise.

2. We can teach effectively through television provided that it is built into a teaching system that involves students in active learning and brings them into contact with tutors.

3. We do not have to wait until we get peak times on a special educational channel; indeed peak times will have their own disadvantages. Even the marginal times at present available can be used to effect.

4. The cost, even on the relatively small scale on which we worked, need be no greater than that of normal class teaching; if the scale were enlarged it could certainly halve normal costs.

5. It would probably prove economic in the use of teaching skills as well as money. Even if an element of face-to-face tutoring is built into the system this will probably require fewer tutors than would be needed if the same number of students were taught in normal classes. What is more important is that it would require less skilled tutors; a very high degree of pedagogic skill is required in those who plan and write the course and the exercises but not necessarily in those who mark them.

6. I think we know enough already to say that this is a method of teaching which works and which ought to be used and developed. But this is not to say that more research and experiment is not needed. For example:

   - Television is costly; sound radio is relatively cheap. How can the two best be linked? Will it prove possible to start a course on television and then carry the students over onto radio?

   - Can self-marking techniques be used to reduce to a minimum the delay between the writing of an exercise and its correction? Do we have to build in safeguards against cheating? Or can students learn by cheating?

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- How near are we to producing an efficient video-tape recorder, compatible with those used by the broadcasting companies, at a reasonable price - say £1,000 or less? If we had such a machine our timetabling difficulties would be greatly diminished. But on what basis should we organise local viewing centres, each with its recorder and its stock of tapes?

- If television-based teaching is accepted, at what points can it make its most effective contribution to our educational system? At university level? At a lower level of professional and vocational training? In industrial training? In general, non-vocational adult education? (These are not, of course, mutually exclusive categories.)

And so on. The questions raised are endless. But this is a measure of the vigour and importance of the new technology.

ANNEX

(A sample of one of the weekly exercise sheets)

EXERCISE 7 - DEMAND INFLATION

Reference Nr. ......

(Programme No. 7 - Sunday, 8th November
and Monday, 9th November)

Name : .... Address : ....

Put a tick in the box if you watched the programme ☐

The first two sections are a quick check on what you have learned. Do not spend more than 10 minutes on them. If you are in doubt turn back to the chapter for the answer.

- SECTION 1 -

True or False : If the statement is true put "T" in the box ; if it is false put "F" in the box.

(a) ☐ There is historical evidence that falling prices and unemployment go together.

☐ Only if investment increases too much will total demand exceed the economy's ability to meet it.

☐ An increase in taxation which increases the government's budget surplus is one way of combatting inflation.

☐ If households stopped saving while there was full employment, and nothing else was done, there would be inflation.

☐ The advantage of cutting investment in order to stem inflation is that it can always be made up later.

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☐ A government committed to a full employment policy must supervise the performance of the economy.

☐ That fact that prices rise is proof that the government cannot control inflation.

☐ Inflation could be avoided if full employment were not maintained.

- SECTION 2 -

Multiple choice : Which of the alternatives completes the statement best? Put a tick in the box beside your choice.

(a) Inflation exists when:

☐ the economy is over-heated.

☐ there is a sustained rise in prices.

☐ the community is buying more than it can pay for.

☐ there is full employment.

(b) Excess demand causes inflation because:

☐ the output of goods and services is not able to rise as fast as demand.

☐ full employment keeps output down.

☐ it compels firms to raise their prices.

☐ government expenditure is too high.

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(c) The central feature of a policy designed to avoid demand inflation is:

☐ the reduction of consumption.

☐ the raising of taxes.

☐ the refusal to make any changes in investment.

☐ the matching of total demand to the economy's full employment output. ✓

(d) With full employment, inflation is a permanent problem because:

☐ it is easier to get wage and salary increases than when there was unemployment.

☐ it is not possible to manage the level of total demand.

☐ there is no margin of idle resources with which to meet an increase in total demand.

☐ it is not possible to maintain full employment and keep prices stable.

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- SECTION 3 -

(a) In what order of preference would you put the following measures to prevent demand inflation? Number them from 1 to 5 in the order you prefer.

☐ Cut back investment.

☐ Increase direct taxes.

☐ Make hire purchase more difficult.

☐ A stand-still on the expenditure of all public authorities.

☐ Increase direct taxes.

Explain why you prefer that order.

(b) What other measures can be used to prevent demand inflation?

ERIC Clearinghouse
APR 6 1970
on Adult Education

N.B. : 1. All students are encouraged to complete the exercise, but it should be posted only by enrolled students.

2. Enrolled students are reminded that the exercise should be posted by Tuesday Evening, 10th November, at the latest.